

1 UNITED STATES DISTRICT COURT
 2 EASTERN DISTRICT OF VIRGINIA
 ALEXANDRIA DIVISION

3 -----X
 4 UNITED STATES, et al., : Civil Action No.:
 : 1:23-cv-108
 5 Plaintiffs, :
 6 versus : Thursday, September 26, 2024
 : Alexandria, Virginia
 7 GOOGLE LLC, : Day 14 p.m.
 : Pages 1-170
 Defendant. :
 8 -----X

9 The above-entitled bench trial was heard before the
 Honorable Leonie M. Brinkema, United States District Judge.
 10 This proceeding commenced at 2:00 p.m.

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P R O C E E D I N G S

THE COURT: Mr. Isaacson.

MR. ISAACSON: Thank you, Your Honor.

DIRECT EXAMINATION (Resumed)

BY MR. ISAACSON:

Q So, Dr. Israel, from the point of view of an economist, what would be the implications if Google had been required to provide access to Google Ads' demand to rival exchanges?

A So generally, from the point of view of a competition economist, you would then be requiring a firm to change the design of its offering and to work with rivals of the firm. That's requiring the firm to deal, I would think, about that as. So the implications to me are you're undermining the firm's ability to integrate in the way it wants and design its own integrated product.

And perhaps even more importantly, there's lots of economics that say that would undermine the firm's incentives to invest.

Q Can you explain that? How does it hurt investment incentives?

A I mean, investment incentives -- if you think about the way firms evaluate investments, they evaluate investments based on whether making the investment will be profitable and generate a return. And a lot of that profit comes from being able to compete more effectively to sell their

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1 products. So if you require a firm to, in a way it doesn't
2 want, share products it has or change its products to
3 work -- to integrate more with other firms than it wanted
4 to, it undermines those incentives because it can't use that
5 product to generate to compete. It's going to end up
6 sharing that and whatever advantage it has.

7 In this industry, actually, for reasons I said before,
8 I worry about it even more because, as I mentioned, one of
9 the key reasons to integrate here is if you make an
10 investment, say, on the buy-side or one part of the path,
11 one part of the stack. It's hard to know exactly where the
12 benefits of that investment are going to go. It affects the
13 whole path.

14 It's a benefit of integration. If you have an
15 integrated operation, you know you'll capture the return, so
16 you have an incentive to invest. If you have to share that
17 with rivals in ways that you don't want to, then that goes
18 away. That return might spill over or go to your rivals,
19 which undermines your incentive to take the action in the
20 first place.

21 Q And what does that sharing with rivals -- what does
22 that do to the incentives of the rival to integrate?

23 A Really, their incentives go down too. They're able to
24 do what economists call a free ride. So they can, you know,
25 take advantage of things that Google has done, and then they

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1 don't have to invest in competing with those.

2 So the competitive process -- generally, as firms
3 develop products, they keep a lot of them in-house, compete.
4 They have the incentive to do that, and the rivals have the
5 incentive to react.

6 So I find it very concerning if we require firms to
7 deal with their rivals in the name of competition, because I
8 think it actually undermines competition.

9 Q So does the same issue of investment and incentives
10 arise if Google is required to -- had been required to
11 provide access to real-time bidding to rival publisher ad
12 servers?

13 A Yes, it's the same issue. I mean, there Google had
14 developed an integrated product through GAM. And requiring
15 sort of equivalent dealings with a rival would make it more
16 difficult. So it undermines some of the advantages to
17 integration and has all of these same issues about
18 undermining investments.

19 Q Do the same issues arise if Google had been required to
20 provide a first look or a last look to its rivals?

21 A That's really the flip side of the same thing. There's
22 an integrated firm offering between AdX and DFP. If you're
23 forced to share that with rivals, I think it would slow down
24 the process and would have all the investment concerns.

25 Q Lastly, is it the same issue if Google had been

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1 required to design its products to allow rivals to use price
2 floors to discriminate against AdX?

3 A Yeah. It's the same issue. That one maybe even goes
4 farther in a way I haven't really heard of in other cases,
5 the idea that a firm is now required to design a product in
6 a way that would allow, you know, publishers or allow
7 options that would disadvantage the firm. I think it's
8 pretty straightforward that would undermine incentives to
9 invest.

10 Q All right. Could you please explain the difference
11 between harm to competition and harm to rivals?

12 A Yeah. So I guess where I would start is competition by
13 its very nature is rivals competing with each other. Some
14 win; some lose. So harm to rivals is an inherent part of
15 the competitive process.

16 One of the things a firm can do that most harms its
17 rivals is cut its prices. But that's sort of the essence of
18 competition.

19 So harm to competition is something that makes it so
20 other firms, you know, can't compete or undermine the
21 competitive process.

22 Q What about the concept of losing scale as a harm to
23 competition?

24 A I mean, again, scale -- sort of the very nature of
25 competition is in an industry -- to the extent there are

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1 scale economies, firms are competing to try to obtain those
2 scale economies. So here, for example, Google, to the
3 extent scale is important, is attempting to obtain scale, in
4 large part, to compete with Facebook and Amazon and firms
5 that have enormous scale. We saw that in the documents.

6 So in this industry, what I see is competition which
7 could generate scale economy as if they're important. But
8 the flip side, which is also good, is there's lots of small
9 competitors who are continuing to compete at a smaller
10 scale. So it seems to me we have sort of the best of both
11 worlds there.

12 Q All right. I want to talk to you about individual
13 pieces of conduct at issue in this case. What's been called
14 the Google Ads AdX exclusivity. Do you have an opinion as
15 to whether Google's decision not to provide rival ad
16 exchange complete access to its Google Ads advertisers was
17 anticompetitive?

18 A Yes. I don't find that to be anticompetitive.

19 Q Okay. Would you explain.

20 A So to find conduct like that anticompetitive, I would
21 have to conclude, among other things, that Google controlled
22 some unique asset that was -- you know, it was truly
23 unique -- that others couldn't get. So it was truly unique
24 and couldn't be competed for.

25 Really, I'd also have to conclude that, you know,

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1 Google is not just winning that by having attractive
2 products and goods pricing. As I talked about before,
3 Google Ads and AdX selectively have a low price. So it's
4 natural that people are going to use that. To find harm to
5 competition, I'd have to think somehow that was unique in a
6 way that others couldn't compete for. I don't see any
7 evidence of such a unique demand here.

8 Q What about the opinion of Dr. Abrantes-Metz, that
9 Google is doing something bad for customers if Google Ads
10 provides curative inventory, rather than offering what it
11 sells to its competitors?

12 A Again, I just disagree. Her opinion, as I heard it,
13 was it's somehow anticompetitive if you don't offer
14 everything possible that you could offer to your customers,
15 but no one does that. All stores make decisions about what
16 to carry. Google Ads grew up as a product that sold
17 Google's O&O offerings and then expanded to sell in an
18 integrated way with Google's ad tech stack. Again, that
19 takes advantage of the benefits of integration.

20 The anticompetitive thing, I think, would be to force a
21 firm to redesign a product, especially when here Google also
22 has a product, DV360, that does sell it.

23 Q Well, just on that point, what does it say about
24 competition to Google offering two products, the more
25 curated Google Ads product and the more open DV360 product?

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1 A I think that's good for competition. That does offer
2 choices, and it's pretty natural that a firm is going to
3 offer two products. They're going to be differentiated from
4 each other, one of them more designed in this kind of
5 integrated curated -- in your words -- way to sell
6 particular products a lot but not everything and the other
7 one really selling everything.

8 Q All right. Let's look at DTX 1978, which is from your
9 report.

10 THE COURT: 1978 is in.

11 BY MR. ISAACSON:

12 Q Now, this table is titled, "Most Google Ads Display
13 Spending Comes from the Largest Advertisers." This is 2022,
14 and what is the data source for this? Is this Google Ads?

15 A Yeah, this is Google Ads' data breaking things down by
16 advertiser.

17 Q All right. Would you explain to the Court what's going
18 on here in terms of large advertisers being part of Google
19 Ads?

20 A We saw something similar before. So I can probably be
21 quick. This breaks it down even more finely. This is
22 saying that in all -- there are many small advertisers at
23 Google Ads. If you just look at the top point, 1 percent of
24 Google advertisers. So the very, very largest at Google Ads
25 will have -- you know, you see here average spending of over

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1 \$10 million. They make up over 70 percent of Google Ads'
2 spending. Just the top .5 percent, still over \$2 million,
3 make up 85.9 percent. So the very largest advertisers that
4 Google Ads make up a vast majority of the spending.

5 Q All right. To be blunt, there's been discussion about
6 Google Ads unique small and medium business demand. How
7 does that relate to this chart?

8 A I mean, even to the extent we would think that was
9 unique -- and again, I don't think that's been shown since
10 those advertisers also make choices about where to go and
11 react to Google's low prices and so on. But even if it was,
12 it would be a very small percentage of Google spending. The
13 vast majority of the Google Ads spending, the revenue that's
14 being competed for, is coming from the very largest
15 advertisers.

16 For that group, nothing in the industry or the record
17 seems consistent with the idea that they don't have choices.
18 If they have inventory they want to buy, they are
19 sophisticated large advertisers. They can go get it.

20 Q All right. Let's look at DTX 1900, another figure from
21 your report.

22 THE COURT: Any objection?

23 MR. TEITELBAUM: No objection.

24 THE COURT: All right. It's in.

25

1 BY MR. ISAACSON:

2 Q All right. This is titled "Professor Lee's Estimates
3 Indicate That Any Possibly 'Unique' Part of Google Ads Does
4 Not Account for a Significant Percentage of Impressions
5 Transacted Through Exchanges."

6 So there is a small dark blue bar that's "Google
7 Ads-AdX (bottom 99 percent)." Then there's a light blue
8 bar, "Google Ads-AdX (top 1 percent)," and then "All Other."

9 Would you explain what this chart is showing?

10 A Sure. So this is looking at the share of U.S. indirect
11 open-web display impressions. So, again, sticking to the
12 market as plaintiffs define it. So Professor Lee had made
13 an argument that a sizable percentage of all of those
14 impressions come through Google Ads with the implication
15 being, you know, Google Ads has this unique, necessary
16 demand.

17 All this is doing is saying, well, where does that --
18 where do most of those impressions actually come from? The
19 light blue part, which is the vast majority of the full
20 Google Ads piece, comes from just the top 1 percent. So
21 just the top 1 percent -- again, those very large
22 advertisers, who, I think, clearly have options, make up the
23 vast majority of that.

24 The other 99 percent, the bottom 99 percent, so almost
25 all Google advertisers put together make up only this darker

1 part, which is, you know, less than 5 percent of total U.S.
2 impressions.

3 Q The previous chart was dollars. This is impressions,
4 right?

5 A Correct.

6 Q Okay. Can we look at -- well, what does this chart
7 tell you about unique demand?

8 A Again, to the extent any demand here was unique, it
9 would be the smaller advertisers. And even if we look at --
10 even if we define smaller advertisers as the bottom 99
11 percent, the picture totally changes. They make up a very
12 small percentage of impressions.

13 Q The DTX 1901 --

14 THE COURT: Any objection?

15 MR. TEITELBAUM: No objection.

16 THE COURT: All right. It's in.

17 BY MR. ISAACSON:

18 Q This is a chart of the most visited web properties in
19 the United States in 2022. What does this show with respect
20 to this issue of unique demand?

21 A So this comes at it from a different point of view,
22 which is -- the allegation, as I understand it, is that
23 Google had attracted advertisers via its owned-and-operated
24 properties and then used that demand it had developed as
25 this source of unique demand.

1 To me, as a competition economist, the question that
2 raises for me is could other firms compete with that same
3 strategy. And so the way they would compete with it is have
4 their own popular properties track advertisers. And then
5 they have a source of demand too, and then they can compete.

6 So here we see that, yes, Google has very popular
7 visited properties, but right behind it are Facebook,
8 Amazon, Yahoo, Bing, and so on. So we immediately see what
9 I discussed earlier, which is Facebook and Amazon and others
10 can and have pursued this same strategy of attracting
11 advertisers and competing by offering them ads in an ad
12 stack.

13 Q All right. I'll show you PTX 1444, which has been
14 previously admitted into evidence. This is a chart of
15 Professor Lee that the Court has seen, and this is the,
16 "Percent drop in publisher payout from removing bidding
17 tool, worldwide," 14.1 percent Google Ads.

18 A And now, if we could, just look at DTX 1986, which is
19 Table 19 from your report.

20 THE COURT: 1936?

21 MR. ISAACSON: 1986.

22 THE COURT: 86.

23 MR. TEITELBAUM: No objection.

24 THE COURT: All right. It's in.

25

1 BY MR. ISAACSON:

2 Q This is "Estimates of Publisher Revenue Effects from
3 Losing Access to Google Ads Advertisers."

4 Would you explain how this chart is responsive to
5 Professor Lee's chart?

6 A Yes. So Professor Lee had that number that was just
7 over 14 percent where he said if you take away all Google
8 Ads demand from publishers and you use that log-level data
9 we've talked about, that tells you the auction results. If
10 you take away all of the Google Ads' bidders, how much --
11 based on those auction results, how much would the payout to
12 publishers go down? He said that would be over 14 percent.

13 You can debate whether even that would be enough to,
14 you know, count as enough to harm competition. But what
15 this is showing is that number is far too high. What I've
16 done here is I just made three -- I made three corrections,
17 I would say, or changes to what Professor Lee has done:

18 One is rather than look at the world, I focus on the
19 U.S.

20 Two is -- and perhaps most importantly -- again, the
21 same idea we've been discussing. Rather than say you can
22 take away all of the Google Ads' advertisers, I say the top
23 of the very, very biggest advertisers are going to find
24 their way to import impressions. They have lots of options.

25 So if you look at the third column here that says "less

1 than 500,000 impressions," there what I've done is I've
2 taken away just the bottom 99.9 percent of advertisers. So
3 still the vast majority of them.

4 Q That number at the top. So you've taken away
5 99.9 percent of advertisers?

6 A Yeah. So I said all that the publisher still has
7 access to is the top .1 percent of Google Ads' advertisers.
8 Because those are the very big advertisers who work with
9 lots of sources and agencies and so on. If we take away all
10 the rest, take away all the other 99.9 percent -- all I've
11 done is look at the U.S., restricted to taking away almost
12 all but not quite all, just 99.9 percent.

13 And number three accounts for the fact that publishers
14 also sell things direct, not just indirect. It's just this
15 re-weighting thing at the bottom.

16 Then if you go to that column I was in, the very bottom
17 number there, 2.6 percent, that's what happens to Professor
18 Lee's 14.

19 Q That's if you include direct. Would you explain the
20 include?

21 A Yeah. So including direct means -- remember,
22 publishers, when you think about how they sell in DFP, they
23 sell some things indirect. They sell other things direct.
24 So part of the revenue that the publisher has that makes the
25 publisher able to make money as a publisher is its direct

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1 sales. So you have to count that in the effect you've had
2 on the publisher.

3 So if we just look at U.S. only, look at almost all
4 advertisers but not all, and account for direct, that
5 14 percent number falls to 2.6 percent. It has a little
6 effect on publishers. We're taking away 99.9 percent of the
7 advertisers -- many of which will probably still find their
8 way there, but it becomes quite a small effect.

9 Q And over on the left, for example, if you only get rid
10 of 4 percent of the advertisers and you keep 96 percent of
11 them, then you get the negative 1.5 percent and negative
12 .7 percent numbers?

13 A So if I make the U.S. change and account for direct and
14 now I take away 96 percent of advertisers but assume the top
15 4 percent can find other options because they're large,
16 yeah, it falls to this .7 percent number.

17 Q All right. Can we look at Israel Demonstrative 3?

18 Did you do a review as part of your work in this case
19 of what other companies state about whether they have unique
20 demand?

21 A Yes.

22 Q And is that laid out on this chart?

23 A Yeah. So the chart shows many of the various ad tech
24 competitors we've been talking about. This phrase "unique
25 demand" seems to be a pretty universal way that companies

1 pitch themselves. They're saying, look, we're a buy-side
2 tool, and we can give you access to unique demand.

3 Obviously, I lean more on all my quantitative analyses,
4 but this tells me the fact that a company uses the words
5 "unique demand" doesn't really tell me anything.

6 Q All right. I want to briefly talk about AWBid, DTX
7 1907.

8 THE COURT: Any objection?

9 MR. TEITELBAUM: No objection.

10 THE COURT: All right. It's in.

11 BY MR. ISAACSON:

12 Q All right. This is, "Google Ads U.S. Spending via
13 Third-Party Exchanges, 2015-2022."

14 Is this the Google Ads' spending on third-party
15 exchanges as a result of AWBid?

16 A Correct.

17 Q Okay.

18 A So the bottom here gives you the total dollars of that
19 spending. Again, remember, AWBid -- there was really two
20 concepts here. One is advertisers themselves can use other
21 tools to find other exchanges. But two is Google Ads itself
22 bids through other exchanges using AWBid. We see that
23 grows -- has grown to, roughly, \$300 million in the last
24 couple of years of data, which accounts for 13 to 15 percent
25 of the total of Google Ads' spending -- as a percentage of

1 spending on exchanges that are in plaintiffs' market.

2 Q The numbers on the upper chart of 15 percent and
3 13 percent are somewhat higher than some lower numbers that
4 have been attributed to AWBid during this case.

5 Can you explain those discrepancies?

6 A It's the same dollar amounts that I'm looking at on the
7 bottom. It's just I'm expressing this as a percentage of
8 exchange spending. So I think some of the other numbers
9 have added in AdSense or AdMob, other things for Google,
10 which are not in the exchange market as defined. They make
11 in-house Google look bigger. So they make the third-party
12 percentage look smaller. What I'm doing is restricting two
13 exchanges.

14 Q Okay. Let's talk about what's been called AdX DFP
15 exclusivity. To what extent is it your understanding that
16 DFP and AdX being sold together under one contract is what
17 plaintiffs are characterizing as a tying claim from the
18 point of view of an economist?

19 A So the way I characterize it, as an economist, that
20 selling it under one contract is really part of the
21 integration. It's having one offering. I don't understand
22 that to be what's being disputed. I understand what's being
23 disputed is whether AdX makes real-time bidding available to
24 third-party ad servers in exactly the same way that it does
25 to DFP.

1 Q And if DFP and AdX are sold together or separately,
2 does that have any effect on whether there's access of
3 real-time bidding to rival ad servers?

4 A No. Again, as I analyze the conduct, as an economist,
5 that's an independent thing. It's what we talked about
6 earlier, this decision about whether Google has to make the
7 real-time bidding available in the same way to a
8 third-party. That's separate from how they sell their own
9 products.

10 Q All right. The Court has heard a lot about first and
11 last look. Let's just spend a little bit of time here.

12 What is your opinion as to whether dynamic allocation
13 and enhanced dynamic allocation, including any first look or
14 last look, provided benefits to publishers compared to the
15 previous waterfall?

16 A I mean, clearly, it did. It added additional demand, a
17 source of real-time demand into the process. Professor
18 Milgrom went through that in detail, but I agree. Clearly,
19 it benefits publishers relative to what was there before.

20 Q Okay. Now, at least some plaintiff witnesses have
21 suggested that Google should've offered alternative
22 real-time bidding sources on an earlier date.

23 As a competition economist, what's your opinion of
24 that?

25 MR. TEITELBAUM: Objection to responding to live

1 testimony from witnesses, I believe plaintiffs' experts.

2 THE COURT: The preface is not proper. Just ask
3 him the question.

4 MR. ISAACSON: All right. And this is all out of
5 the reports, Your Honor. This is not something that came
6 out new in trial. In fact, when I said plaintiffs
7 suggested, I meant reports.

8 BY MR. ISAACSON:

9 Q As a competition economist, what's your opinion about a
10 view that Google should've offered alternative real-time
11 bidding from an earlier date to third-party ad servers?

12 A Yeah. That's a part I've thought about a lot from a
13 competition point of view. I think it would be harmful to
14 competition. It's not a good idea to say that somehow
15 Google should have been required to roll out innovations
16 faster or that Google has somehow behaved anticompetitively
17 based on how it's innovated.

18 We certainly see Google continuously innovating over
19 time in terms of how it runs these auctions. And some -- if
20 you -- my problem is if you think -- say they should have
21 gone faster, you have two problems, I think, that creates.
22 One is, you know, you end up in this situation where you
23 can't get any innovation until all the innovations are
24 ready. So you end up harming customers because you can't
25 roll out the first innovation if you're not fully ready for

1 the second.

2 And number two, I think that sort of a standard would
3 cause firms to be hesitant to roll out innovations at all
4 for the risk of being deemed anticompetitive if they didn't
5 roll them out fast enough.

6 It's all really just other versions of the requirement
7 to deal. If you tell firms they have to do things in a
8 certain way, it's going to make it harder to invest.

9 Q All right. Let's put this in the context of this
10 case's time line. Israel Demonstrative 4, these are some
11 dates you put into this demonstrative, correct?

12 A Yes.

13 Q Would you explain your opinion in the context of this
14 case?

15 A I mean, it's simply 2007. Prior to the DoubleClick
16 acquisition, there was dynamic allocation. Under Google, we
17 got -- things really in 2014 got to enhanced dynamic and
18 then rolled forward from there. There was header bidding as
19 a competitive response, and then there was exchange bidding
20 responding to that. Then eventually, the Unified
21 First-Price Auction. So this is a pretty steady path of
22 Google innovations competitive responses, responses to that.
23 That's what I like to see as a competition economist.

24 Again, if you tell Google you can't roll anything out
25 until the Unified First-Price Auction is ready, for example,

1 you'll probably slow the whole process down. And again, if
2 you're seeing innovation but you're just making firms deemed
3 anticompetitive for not innovating fast enough, I just think
4 that has really chilling effects on the ability to innovate.

5 Q And what's your opinion as to whether this total path
6 of integration that you've described, whether that harmed
7 header bidding?

8 A Header bidding is a part of the competitive process
9 here. I think if header bidding is a good example of what I
10 say, as a competition economist, which is that competition
11 tends to find a way. So you know, when Google rolled out
12 its DA and EDA, header bidding was a competitive response as
13 far as finding ways for others to compete inside DFP.

14 And the thing to me really is header bidding is alive
15 and well and thriving and growing, as I indicated earlier.
16 So Google has not hindered it. They've competitively
17 responded to it. But as long as header bidding is there and
18 thriving and winning even more than AdX, to me that says
19 publishers can use header bidding. Advertisers can use
20 header bidding. Everybody is competing for this inventory.
21 Whatever we're talking with DA, EDA, and the rest of it has
22 not stopped competition.

23 Q All right. Let's talk about Uniformed Pricing Rules.
24 What is your opinion as to whether Google's launch of the
25 Unified Pricing Rules harmed competition?

1 A This is a place where I really come at it from the way
2 I've been setting up my view, that you should think about
3 competing ad tech paths or platforms. So if you think about
4 it from that point of view, Google has to offer an ad tech
5 platform or path to compete with the other ad tech players,
6 like Facebook and Amazon.

7 So I see Uniform Pricing Rules as a part of that
8 competition. In particular, it doesn't make sense to me
9 to -- even if there was harm to publishers, which we can
10 talk about. But even if you thought about the publisher
11 side, it doesn't make sense to me to ignore what seem to be
12 clear benefits to advertisers. Because Google is operating
13 an ad tech platform that has to compete for the business of
14 those advertisers.

15 And if it determines that UPR is a good auction rule
16 that helps it compete for the business of those advertisers,
17 that's something it needs to do when it's facing competition
18 from Facebook and Amazon and some of the others who are
19 competing for those advertisers.

20 Q I'll ask you to look at DTX 1909, which is a chart from
21 your reports.

22 THE COURT: Any objection?

23 MR. TEITELBAUM: Your Honor, for the truth of the
24 matter, I do have an objection to this. This relates to a
25 motion in limine that we filed.

1 MR. ISAACSON: My question won't be about the
2 truth of the matter.

3 MR. TEITELBAUM: Well, then in that case, we
4 object to the admission of the exhibit if it's not being
5 offered for the truth of the matter.

6 THE COURT: What's the purpose?

7 MR. ISAACSON: This shows that Google was
8 monitoring the reaction to UPR, which is relevant to
9 Google's conduct in this case.

10 THE COURT: Well, you are offering this document
11 to establish a fact. So that bumps into the objection.

12 MR. ISAACSON: Well, the fact is that Google was
13 monitoring the reaction. The fact of -- the actual
14 results -- you know, we're not seeking to admit that for the
15 truth. But when a company is looking at a survey that
16 indicates that they are looking at customer reactions, the
17 Court doesn't have to accept the survey as being truthful.

18 THE COURT: You can just ask the question without
19 needing the exhibit.

20 MR. ISAACSON: Okay.

21 BY MR. ISAACSON:

22 Q What did you find from your investigation as to whether
23 Google was monitoring the reaction to Uniform Pricing Rules
24 in 2020?

25 A It certainly was monitoring them through various means,

1 through running its surveys and talking to publishers.

2 Q Okay. Given your opinion that Uniform Pricing Rules
3 were beneficial to advertisers -- and you've referred to
4 publishers -- what was the overall competitive effect of the
5 Uniform Pricing Rules?

6 A Again, I think the competitive effect was
7 pro-competitive competition with other ad tech platforms.
8 Google -- a critical thing and a beneficial thing that an ad
9 tech provider can do if it's on both sides is balance. All
10 right. That's a critical function that makes the benefit of
11 integration I didn't really mention enough before.

12 The firm can think about advertisers have interests.
13 Publishers have interests. We have to compete to make
14 matches. So if Google decided advertisers really like this,
15 others are calling it a best practice, we're looking at
16 publishers, we're balancing those things, but we think it's
17 beneficial to the ability of our platform to compete for the
18 business, then that's a pro-competitive thing to do.

19 Q And then just touching on Admeld, if we could, look at
20 Israel Demonstrative 5.

21 What was your understanding of the state of competition
22 for Admeld, specifically in yield management technology,
23 prior to the acquisition of Admeld by Google?

24 A My understanding is there were three main yield
25 management providers, Admeld, PubMatic, and Rubicon.

1 Q And what was your understanding of the state of
2 competition after the acquisition?

3 A There were still three. Google hadn't been one of the
4 three. So that wasn't a merger that reduced -- took away a
5 competitor in yield management. There were still three.
6 There were just Google, PubMatic, and Rubicon.

7 Q So did the acquisition eliminate any yield management
8 options for the marketplace?

9 A Switched Admeld to Google. Google continued to provide
10 the service to publishers. So no.

11 Q There's also been discussion of Admeld technology to
12 provide real-time bids to third-party ad servers. We won't
13 go through all that technology, but to what extent do you
14 have an opinion regarding Google's decision not to
15 incorporate real-time bidding technology that Admeld may
16 have had for the benefit of third-party ad servers?

17 A Mainly, that it's not sort of specific to the Admeld
18 merger or a new allegation. We've already talked a couple
19 of times now about Google's strategy in terms of real-time
20 bidding to DFP versus real-time bidding to other ad servers.
21 That was a strategy Google was pursuing anyway, and the
22 Admeld transaction really doesn't change that.

23 Q The real-time bidding technology to be applied to
24 third-party ad servers, that's the -- when we're talking
25 about third party -- real-time bidding technology for

1 third-party advertiser as Google's conduct, are you equating
2 those two?

3 A Real-time bidding to third-party ad servers?

4 Q Yes.

5 A I'm saying the conduct we've talked about others have
6 talked about about Google's policies towards real-time
7 bidding to DFP and other ad servers. It's the same thing
8 we're talking about with Admeld. The Admeld transaction
9 doesn't add anything to that.

10 MR. ISAACSON: Thank you, Dr. Israel.

11 THE COURT: All right. Cross-examination.

12 Will I need any of the books that I currently have
13 for this?

14 MR. TEITELBAUM: There's a possibility that you
15 will, Your Honor.

16 THE COURT: Okay.

17 CROSS-EXAMINATION

18 BY MR. TEITELBAUM:

19 Q I'll wait for you to get water, Dr. Israel.

20 A Thank you.

21 Q Good afternoon.

22 A Good afternoon.

23 Q So you testified under oath a little over 40 times as a
24 paid expert witness since 2015. Does that sound about
25 right?

1 A I don't have the exact count, but that could be right.

2 Q That would include trial testimony, depositions, and
3 other proceedings?

4 A If it includes depositions, I might have thought it
5 would have been more.

6 Q Okay. You also testified, including as recently as two
7 weeks ago, in the *Kroger-Albertson* murder trial in the
8 Western District of Washington?

9 A That's true. It's been a busy couple of weeks.

10 Q And that was as a witness for the grocery store
11 defendants, right?

12 A Correct.

13 Q This testimony that we were just describing, the live
14 testimony, that does not include additional expert
15 declarations and reports that did not result in testimony?

16 A I mean, I don't know your exact count. So I'm not sure
17 what you're counting, but there would be a separate
18 category.

19 Q I'm just counting off your CV.

20 A So my CV would list live testimony and separately list
21 declarations and separately list expert reports.

22 Q Okay. So aside from whatever additional work you've
23 done basically within the past eight months, your CV would
24 be the best source of your expert witness work?

25 A I certainly try to keep it complete.

1 Q Okay. Google is a repeat client of yours?

2 A This is the second time I've worked for Google.

3 Q And the first time was testifying on Google's behalf in
4 the search litigation in D.C., right?

5 A That's correct.

6 Q All right. And overall, your primary work is as a
7 consultant and expert witness?

8 A Generally -- I mean, I just want to -- I also run
9 Compass Lexecon, and I -- as part of that, I do various
10 projects on competition economics, but it's all within that
11 Compass Lexecon work.

12 Q And I believe that the ballpark figure you've given
13 previously is about 80 percent of your income in 2023, for
14 instance, was from actual expert witness work, and then the
15 remaining 20 percent was Compass Lexecon management duties?

16 A Did I say income or time? It's a little hard to --

17 Q I think you said income.

18 A It's a little hard to break up just because of how I'm
19 paid. I think it's fair to say 80 percent of what I do is
20 expert work -- 80 to 85 probably and less than 20 is
21 management work.

22 Q And you have not previously held a tenured faculty
23 position at any educational institution, correct?

24 A That's correct.

25 Q All right. Let's just talk briefly about some of your

1 recent work. You offered opinions on market definition both
2 in the Google search case, right, last year?

3 A Yes.

4 Q And you also offered opinions on market definition
5 recently in the *FTC v. IQVIA* case in the Southern District
6 of New York?

7 A That sounds right, yeah.

8 Q In each of those cases, you were testifying for the
9 defendant, right?

10 A Yes.

11 Q And in each of those cases, you testified that the
12 plaintiffs defined a way important competition, right?

13 A Yes.

14 Q And in the *IQVIA* case, the district court disagreed
15 with you, right?

16 A The opinion agreed on some things and disagreed on
17 others but ultimately ruled for the FTC.

18 Q Okay. And in the Google search case, at least with
19 respect to the product market for general search, the
20 district court disagreed with you, correct?

21 A I recall it being general search -- was it like general
22 text search?

23 Q It's fair to say there were some disagreements and some
24 agreements?

25 A In that one, there were a number of markets, and it was

1 sort of half and half.

2 Q Okay. You also recently testified as an expert witness
3 in the *United States v. American Airlines and JetBlue* case,
4 right?

5 A Yes.

6 Q And that's sometimes referred to as the *Northeast*
7 *Alliance* case?

8 A Yes.

9 Q It was in the U.S. District Court in Boston, right?

10 A Right.

11 Q And in that case, the court found in its opinion that
12 you provided testimony that was, quote, not credible, end
13 quote, regarding certain conversations with airline
14 executives and attorneys that occurred before the trial,
15 right?

16 A Something like that. I don't remember all the words,
17 but that court was certainly -- disagreed strongly with me
18 in that case.

19 Q Okay. And beyond disagreeing, actually found that your
20 testimony was not credible?

21 A That's fair.

22 Q And the court also found that you, quote, demonstrated
23 a misunderstanding and misapplication of antitrust concepts,
24 end quote?

25 A That sounds right. That sounds like what the opinion

1 said.

2 Q Okay. And the opinion also said that you, quote,
3 rendered opinions based on false assumptions, end quote,
4 right?

5 A Again, that sounds right.

6 Q Okay. And then, finally, that you, quote, failed to
7 account for the circumstances presented by the NEA, end
8 quote, right?

9 A That sounds right.

10 Q So let's move on to your work in this case.

11 So we've had a lot of food analogies in this case. So
12 I'm going to move adjacent to that to kitchen appliances --

13 A Okay.

14 Q -- just for a little bit of variety.

15 So is it fair to say that a lot of American households
16 are going to have both a refrigerator and a dishwasher?

17 A That seems fair.

18 Q And so we could probably make -- for instance, if we
19 were to pull up --

20 MR. TEITELBAUM: Let's pull up what's already in
21 evidence as DTX 1858.

22 BY MR. TEITELBAUM:

23 Q So we could probably make a very nice -- I will call it
24 pistachio, salmon, and gray pie chart with dishwasher and
25 refrigerator ownership as well, right? We'd probably say

1 maybe more than half of American households have both. Some
2 people only have a frig and, you know, probably a smaller
3 percentage have neither. Is that fair? I'm not going to
4 hold you to specific percentages because I know you didn't
5 prepare on kitchen appliance. I just have that question.

6 A Please don't hold me on those colors either.
7 Certainly, you could make a pie chart that would say most
8 people have a refrigerator and a dishwasher.

9 Q Okay. And does that statistic alone mean that a
10 dishwasher and a refrigerator are substitutes?

11 A That statistic alone doesn't. I tried to explain what
12 I take it for here, but that statistic alone does not mean
13 that.

14 Q So in other words, just buying two things or owning two
15 things is not in and of itself evidence of any type of
16 substitution, right?

17 A I think that's fair at that level. Again, I tried to
18 explain how here the options it gives specific to this case.
19 But yeah, I don't want to say I'm saying the facts you own
20 two things means they're substitutes.

21 THE COURT: A better example might be if you owned
22 a stove and a microwave.

23 BY MR. TEITELBAUM:

24 Q Similarly, if you owned a stove and a microwave, does
25 that mean that they are substitutes?

1 A Well, that wouldn't -- the fact that you owned them
2 both wouldn't mean they were substitutes, but it's a better
3 example of what I'm saying. Which if you stop liking how
4 your stove performs, the very easy thing to do might be to
5 use your microwave as opposed to go get a new stove.

6 Q So do you think it would be advisable to do away with
7 the stove altogether in that circumstance?

8 A No. I hope I was clear. It's not about getting rid of
9 it altogether. It's about what substitution there might be.

10 MR. TEITELBAUM: I can promise the Court that this
11 is my last analogy that doesn't specifically relate to ad
12 tech.

13 THE COURT: It was a pleasant change.

14 THE WITNESS: Although, it still makes us hungry.

15 BY MR. TEITELBAUM:

16 Q Let's talk now about smartphones and dishwashers for a
17 minute. So if we were to go back, say, 15 years -- and
18 let's just take a generic household budget for a family of
19 four. You know, you might see, if you were going to track
20 the percentage of household budget spending over time, that
21 over the course of the years, say from 2009 to the present,
22 the percentage of the household budget spent on smartphones
23 is going to probably increase dramatically, right?

24 A For sure, yes.

25 Q Because it's going to go potentially from zero to, you

1 know, something a lot more than zero?

2 A Yes.

3 Q And dishwashers are probably going to maybe in absolute
4 dollar terms stay the same but might go down as a matter of
5 percentage, right?

6 A That one I don't really know. I haven't tracked the
7 prices of dishwashers.

8 Q That's fair enough, and I don't think anyone is going
9 to hold that against you in this case.

10 So a chart over time that just shows changing
11 percentages of spend on two different items doesn't mean
12 that smartphones and dishwashers are substitutes, right?

13 A Just the change in percentages doesn't mean that
14 they're substitutes. It's what you know -- it's the body of
15 evidence of what you know about the products more broadly
16 together with that evidence.

17 Q Okay. So similarly -- so when we were looking at the
18 charts that showed, for instance, Google's advertising spend
19 on Fitbit, just the fact that there's a shift in percentages
20 among different advertising spend does not in and of itself
21 indicate that those things are substitutes, right?

22 A That's a lot different from smartphones and
23 dishwashers. I suppose -- just the chart by itself, if I
24 just showed you the numbers, I wouldn't stop there. But
25 combined with the fact that we know --

1 Q Well, we can stick with my question. We can get to the
2 additional evidence, but just that chart in and of itself,
3 that doesn't tell us that those different types of
4 advertising are substitutes, right? You'd need more
5 evidence than that?

6 A I would not want to present just the chart of numbers
7 by itself without more context, I would say, and evidence.

8 Q Okay. So regrettably, I will now turn back to the
9 technology at issue in this case.

10 So let's talk a little bit about some overarching
11 principals of market definition, Dr. Israel.

12 So when attempting to define a product market, we are
13 looking for a market that includes close substitutes, right?

14 A Certainly, it should include close substitutes. I
15 usually say try to include all significant substitutes.

16 Q Okay. And another way of putting that, just from your
17 report, for instance, is that the items are reasonably
18 interchangeable?

19 A That's a little -- that's less of a term of art in
20 economics. That's more of a term that's been used in the
21 law. But if by that you mean substitutes consumers would
22 use them -- would switch to the other if one of them became
23 less attractive, then yes.

24 Q I am just asking because it was a term that you used in
25 your report when you were talking about market definition.

1 So you would agree that any substitutes is not the
2 correct metric, right?

3 A I agree with that.

4 Q All right. And it's also not necessary for a correctly
5 defined product market to include every single close
6 substitute that might exist in the world, right?

7 A I don't know. I mean, if you're leaving out a close
8 substitute, I would have some concerns about the market. It
9 certainly doesn't have to include every substitute. I think
10 this might turn on how we're defining close.

11 Q Generally speaking, you'd agree that a correctly
12 defined product market has to include enough close
13 substitutes such that if one firm controlled all of those
14 products, that firm could maintain prices above competitive
15 markets, right?

16 A That's the hypothetical -- well, actually, no, I don't
17 agree with the way you just said the test.

18 Q Okay.

19 A I agree with the way I've defined the hypothetical
20 monopolous test as one part of the standard but not the
21 entire standard.

22 Q So I know we already talked a little bit about the
23 Fitbit and Comcast campaign information, but I would like to
24 bring DTX 1847 back up, please, which I believe is already
25 in evidence.

1 So you provided this chart as an example of an
2 advertiser here at Google shifting spend over time in an
3 attempt to optimize its advertising return on investment,
4 right?

5 A Yeah. I think what I said is that dollars are clearly
6 shifting, and what we know more generally is that firms are
7 evaluating returns and reacting to it. So I think I said
8 that would be a reason why the dollars would shift.

9 Q Right. But there are a lot of reasons why a particular
10 advertiser might shift spend from one type of advertising to
11 another that have nothing to do with substitution, right?

12 A Actually, shift spend? I'd need an example of what you
13 mean.

14 Q Well, for instance, I mean, what if the goals of the
15 advertising campaign changed? That would be a reason to
16 change the mix of advertising that's being purchased, right?

17 A I suppose in general. What I said was large
18 advertisers tend to focus on things like return on
19 investment or actions they want to induce, in which case
20 they're generally substituting based on which of those --
21 which form gives them a better return. So I guess I'd need
22 more specifics on what goals you have in mind.

23 Q All right. Well, the data that you used to prepare
24 this table actually included a field referring to the goal
25 of the campaign, right?

1 A I don't remember.

2 Q Okay. Well, so would it surprise you to know that the
3 data included four values in that field, which included
4 awareness, consideration, other, and trial purchase,
5 parentheses, ROAS, return on advertising spend?

6 A It wouldn't surprise me. I have seen terms like that.

7 Q All right. And there's no information here on this
8 chart that accounts for any change in the goals of the
9 campaign, right?

10 A Certainly not on this chart.

11 Q All right. And similarly, if we just look briefly at
12 DTX 1848.

13 Once again, we don't have any information here for the
14 Comcast Xfinity campaign about whether or not there were any
15 changes in the goals of the campaign over the course of 2015
16 to 2022, right?

17 A Certainly, the chart has what it has. It doesn't
18 include that.

19 MR. TEITELBAUM: All right. We can take that
20 down.

21 BY MR. TEITELBAUM:

22 Q So you were not offering an opinion on the specific,
23 correct product market definition in this case, right?

24 A I think the way I've said it and would say it is I'm
25 not offering the outer boundaries. I'm offering the opinion

1 that plaintiffs' market is subdivided too much, needs be
2 two-sided, is too narrow. But how far you have to push into
3 digital advertising to be a market, I am not offering an
4 opinion on the boundary.

5 Q So put another way, whatever types of advertising you
6 need to include, you should analyze it as a single two-sided
7 market; is that fair?

8 A I mean, yes, I agree with that, but I think I'm saying
9 more. I am offering the opinion that you would need to
10 include apps and video and direct sales. I think I've
11 offered the opinion strongly that social should be in there.
12 But beyond that, whatever forms of digital advertising need
13 to be included, I have not offered that opinion because it
14 doesn't affect my conclusions.

15 Q All right. So I want to talk to you a little bit about
16 this two-sided ad tech market. Does it include ad exchanges
17 like AdX?

18 A Sorry, I couldn't hear you.

19 Q Does it include ad exchanges like AdX?

20 A AdX -- I mean, again, I think of it as competition
21 between paths that get you from an advertiser to a publisher
22 or to impression, and AdX would be a part of some of those.

23 Q All right. Does the two-sided market that you're
24 putting forth include publisher ad servers like DFP?

25 A The same answer. They would be part of paths that are

1 competing.

2 Q All right. And the same answer for demand-side
3 platforms, like DV360 and The Trade Desk?

4 A Yeah, they would be pieces of some of the paths.

5 Q And the same answer for Facebook and TikTok's ad tech
6 tools?

7 A Yes.

8 Q So to be clear, this would be a market that includes
9 both buy-side and sell-side tools, as well as any exchanges
10 that sit in the middle of those two?

11 A I mean, those various pieces could be part of some of
12 the paths that compete.

13 Q Okay. So that's a yes to my question in terms of
14 what's in the two-sided market that you're putting forth?

15 A I mean, I just -- I think it's a -- best thought of as
16 a market for tech that gets you from A to B. So I don't
17 want to say that a player in the market is an ad exchange by
18 itself. An ad exchange is a piece of some of the path, like
19 an input to some of the path.

20 Q The reason I'm asking this is because you've stated
21 that you're putting forth a product market that is a
22 two-sided market that includes certain types of advertising,
23 right?

24 A It's a two-sided product market for making these
25 connections, and part of defining that is the places where

1 those connections can be made, which I think is what you
2 mean by types of advertising.

3 Q Well, a product market doesn't need to have products in
4 it, though, right?

5 A Certainly, it does.

6 Q Okay. So it is your testimony that Facebook and
7 TikTok's ad tech tools are in that market, correct?

8 A Yes.

9 Q All right. Are you aware that the suggestion that
10 you've made for this product market directly contradicts the
11 position that Google took in the United States District
12 Court for the Northern District of California within the
13 past two years?

14 A I couldn't hear with the door closing.

15 Q Are you aware that the suggestion you've made for this
16 two-sided product market directly contradicts the position
17 that Google took in the U.S. District Court for the Northern
18 District of California in 2021?

19 A Yeah. I don't think that I know that specifically. I
20 don't think it was a case I was involved in.

21 Q Okay. But are you aware that Google actually
22 challenged an ad tech product market definition that
23 combined buy-side and sell-side tools because, according to
24 Google, these products are not, quote, reasonably
25 interchangeable by consumers for the same purposes, end

1 quote?

2 MR. ISAACSON: I object. This was the motion to
3 dismiss case that was put in front of you.

4 THE COURT: Well, I think when we get to the
5 closing argument on the case, this is an issue that's
6 legitimate, but I don't think it's right to be asking this
7 witness questions about it.

8 MR. TEITELBAUM: Understood, Your Honor. For the
9 purposes of the trial record and so that can be
10 appropriately argued, I would just ask that the Court take
11 judicial notice of two separate documents related to that,
12 and then I can move on to something else.

13 THE COURT: That's fine.

14 MR. TEITELBAUM: And these are in the binder, but
15 it would be Exhibit 2 to plaintiffs' memorandum in support
16 of our motion in limine in this case. So that's ECF 1158-2,
17 which is Google's motion to dismiss in the California
18 case -- we just attached it -- as well as the district
19 court's ruling on the motion to dismiss in California, which
20 is *In re Google Digital Advertising Antitrust Litigation*,
21 2021 WL 2021990.

22 MR. ISAACSON: And in light of this, we would like
23 leave to submit what we think there's been judicial notice
24 of as well.

25 THE COURT: All right. We can get to that down

1 the road. Let's finish with our witness.

2 Thank you.

3 MR. ISAACSON: Down the road.

4 THE COURT: Again, I think for purposes of
5 complete transparency, can you upload those as well?

6 MR. TEITELBAUM: Absolutely.

7 THE COURT: Okay.

8 BY MR. TEITELBAUM:

9 Q All right. So we can leave the California case in the
10 rearview mirror and move on to something else.

11 Is it your testimony that DV360 is reasonably
12 interchangeable with DFP?

13 A Again, that's defining things by component, which is
14 not how I would define them. I think they are -- they can
15 each be part of paths, ad tech that is reasonably
16 interchangeable for each other.

17 Q But they themselves are not reasonably interchangeable?

18 A I think those are inputs, components that serve
19 different purposes within those paths.

20 Q All right. And is it your testimony that AdX is
21 reasonably interchangeable with Facebook's ad tech buying
22 tools?

23 A Not AdX by itself but the --

24 Q All right. So that's a no? Your answer is no?

25 A My answer is that AdX is reasonably interchangeable

1 with the exchange function inside Facebook.

2 Q Okay. But not with Facebook's buying tools?

3 A I guess -- Facebook's buying tools? Again, the
4 function that AdX and the Facebook buy tools --

5 Q I think my question calls for a yes or no. I would ask
6 that you answer it yes or no.

7 A Again, not on their own S components.

8 Q Is it your testimony that DFP is reasonably
9 interchangeable with TikTok's buying tools?

10 A Yeah. I think my answer is -- if you are thinking
11 about these things as individual components -- it's never
12 how they're used -- then the answer would be no. Those
13 components don't do the same thing.

14 Q So do you agree with me, then, that these items do not
15 belong in your single two-sided product market?

16 A No.

17 Q All right. So you agree, then, that your single
18 two-sided product market includes within it things that are
19 not reasonably interchangeable with one another?

20 A I mean, as pieces, as inputs into what's competing. I
21 mean, there are lots of analogies that I'd be happy to give
22 to that.

23 Q Well, if we have time, we can try to do it with kitchen
24 appliances at the end.

25 THE COURT: No comments.

1 MR. TEITELBAUM: Oh, I'm sorry, Your Honor. I
2 didn't even mean that to be hostile to Dr. Israel.

3 BY MR. TEITELBAUM:

4 Q Dr. Israel, to the extent that you think that a single
5 two-sided ad tech product market is a correct market in this
6 case, can you please identify for us the companies that
7 compete with Google in that market? And if you don't want
8 to list them all, you can give us the top four.

9 A I am not even sure I can rank the top four sitting
10 here.

11 Q Okay.

12 A I certainly went through many in my testimony. So
13 Facebook, Amazon, Microsoft -- Criteo is in there. I mean,
14 they are listed throughout my testimony.

15 Q Okay. And TikTok is also up there somewhere?

16 A Yes. And some of the competitors would be, you know,
17 combinations of products for more than one company.

18 Q Okay. Can the *New York Times* use TikTok's ad tech
19 tools to sell display advertising inventory on its website?

20 A To sell display advertising inventory on its website?
21 Probably not. That's probably not how that -- the match
22 would be made in that case.

23 Q All right. And similarly, can the *New York Times* use
24 Facebook's ad tech tools to sell display advertising
25 inventory on its website?

1 A Again, some of these things are complicated about the
2 ways you can patch into them, but that's probably not the
3 path that the match would take in that case.

4 Q And similarly, an advertiser cannot use TikTok's ad
5 tech tools to buy open-web display inventory on the *New York*
6 *Times* website, right?

7 A Not to buy open-web display. I mean, again, that's
8 assuming that -- a market definition, but you'd have to use
9 it to buy TikTok inventory and to reach your user in that
10 way.

11 Q Advertisers using TikTok's tools can buy TikTok's
12 inventory?

13 A Correct. So if they're trying to reach users, they
14 would go through TikTok.

15 Q All right. And similarly, for the *New York Times* to
16 sell the display advertising inventory on its app, it needs
17 different technology to do that compared to when it's
18 selling the inventory on its website, right?

19 A That depends. Some of the same technology can do both.
20 Entire paths can do both. There just are also other
21 options.

22 Q Are you familiar with something called an SDK?

23 A SDK, I don't know by those letters.

24 Q Okay. And no matter how many advertisers might switch
25 to TikTok's or Facebook's buying tools, the *New York Times*

1 still has display advertising inventory on its website that
2 it has to sell somehow, right?

3 A That's fair.

4 Q And you talked a little bit about Amazon as one of the
5 competitors. Are you aware that Amazon is the
6 second-largest customer of Google Ads?

7 A I wouldn't have known it was second. Some of what I've
8 shown list Amazon as a large advertiser. That was in one of
9 my exhibits.

10 Q All right. But in this particular instance, with
11 respect to Google Ads, then Amazon's a customer, not a
12 competitor?

13 A It's both, another thing that happens pretty often.

14 Q All right. And you testified previously that the
15 possibility that an advertiser can shift from one buying
16 tool to another is going to discipline a company like Google
17 on the publisher side in terms of how it treats its
18 publisher customers, right?

19 A Yes.

20 Q Despite that, you agree that Google did, in fact,
21 implement Unified Pricing Rules?

22 A I mean, I don't know if I agree to despite that, but I
23 agree that it implemented those rules.

24 Q All right. So let's talk about Facebook for a little
25 bit. You noted during your direct examination that Facebook

1 is one of the most significant competitors for Google in
2 this broader two-sided market that you've posited, right?

3 A That's fair, yes.

4 Q So let's take a look at what, I think, has now been
5 successfully incorporated into the binders at what's already
6 in evidence as PTX 1709. There should be a redacted version
7 that's going to be shown publicly. Just let me know when
8 you're there, Dr. Israel.

9 A I'm there.

10 Q All right. Just for your awareness, the material
11 that's in the red boxes we should not say publicly.

12 A Okay.

13 Q But do you see there at the bottom where Facebook is
14 referring to Google as the dominant technology provider for
15 publishers, and then it says that they control the lion's
16 share of the ad serving market?

17 A I see that.

18 Q Okay. And then I won't state the number, but you see
19 there in the red box that Facebook identifies a market share
20 that Google has in a particular category for this case,
21 right?

22 MR. ISAACSON: I object, Your Honor. That does
23 not say market share.

24 MR. TEITELBAUM: It identifies a percentage.

25 THE COURT: A percentage. All right.

1 BY MR. TEITELBAUM:

2 Q Is that fair?

3 A Yeah. I mean, I see the percentage, and it says in
4 video DFP.

5 Q Okay. So in other words, one of the companies that
6 you've identified as a primary competitor of Google is
7 referring to Google as the dominant technology provider,
8 right?

9 A I mean, I don't recall this entire document or all the
10 context, but I definitely see that sentence.

11 Q And then if we could turn to the second page -- and
12 this is the Bates number ending in 934. You see where
13 Facebook just sort of at the end of the blown-up portion --
14 it's about the middle of the page. You see Facebook is
15 observing that Google has monopoly power in four key forms
16 underneath the heading of "What's the Outlook"?

17 A I do see that.

18 Q Okay. And does that affect your conclusion at all that
19 Google is competing with Facebook in the same two-sided
20 market for ad tech tools?

21 A No.

22 Q Okay. You also noted in your direct examination --

23 MR. TEITELBAUM: And we can take that document
24 down for now.

25

1 BY MR. TEITELBAUM:

2 Q So you noted in your direct examination you believed
3 that Facebook's size and technical sophistication makes it a
4 competitive constraint on Google; is that fair?

5 A I don't recall saying those words exactly. I certainly
6 believe it's a strong ad tech player. That would include
7 its technical capabilities.

8 Q All right. Let's take a look at DTX 1925, which is
9 Figure 112 from your report.

10 THE COURT: Are you moving that in?

11 MR. TEITELBAUM: I am moving it in. I'm having
12 trouble recalling whether it's already in evidence.

13 THE COURT: Well, just play it safe and just move
14 it in.

15 MR. TEITELBAUM: I'd offer it into evidence at
16 this time.

17 THE COURT: Any objection?

18 MR. ISAACSON: No objection.

19 THE COURT: All right. It's in.

20 MS. WOOD: And it is already in.

21 THE COURT: Okay.

22 BY MR. TEITELBAUM:

23 Q So looking just at the top chart first, Dr. Israel,
24 this chart shows that Meta's advertising revenue has grown
25 significantly in the past 14 years; is that fair?

1 A Yes.

2 Q And so let's compare this to another chart, which is
3 Figure 71 in your report.

4 MR. TEITELBAUM: If we could, pull up DTX 1888.

5 And in an abundance of caution, I will move that
6 in as well.

7 THE COURT: All right. That's in.

8 BY MR. TEITELBAUM:

9 Q You see here, Dr. Israel, that with respect to AdX's
10 open auction take rate, the dotted line has stayed almost
11 exactly flat around 20 percent, right?

12 A That's right.

13 Q So just looking at those together, despite Meta's
14 significant display ad revenue growth, we're seeing AdX's
15 open auction take rate remaining unchanged, right?

16 A That specific number has remained unchanged. We talked
17 about other prices and strategies in competition, but I
18 agree on that number.

19 MR. TEITELBAUM: We can take that down.

20 BY MR. TEITELBAUM:

21 Q And sticking with Facebook still for a little bit
22 longer, you're aware that as of 2020, Facebook completely
23 exited the market for ad tech tools that can purchase
24 open-web display ads, right?

25 A Well, I don't agree that's a market. Otherwise, I know

1 that they switched to buying app, not web.

2 Q Their tools no longer have the capability as of 2020 to
3 buy what the plaintiffs have defined as open-web display
4 ads; is that fair?

5 A I don't think that's right. I think their tools could
6 very well do it because they did. I just think Facebook
7 strategically is not doing it.

8 Q They stopped doing it in 2020, correct?

9 A That sounds right.

10 Q We talked a fair amount about advertiser substitution.
11 So I want to switch gears for a minute and talk about
12 publisher substitution.

13 So you stated on your direct that switching to an
14 in-house publisher ad server was going to be a viable option
15 for large publishers, right?

16 A Yeah. I mean -- well, I think what I said is many
17 large publishers have done it, and it seems like the most
18 viable option for the largest publishers.

19 Q And when you say many large publishers have done it,
20 you were able to think of three examples on your direct
21 examination, correct?

22 A As far as switching, yeah. There's at least four that
23 I know of. It was Amazon, Reddit, Snapchat, and one other
24 that I'm not remembering. But that's as far as switching.
25 Many more have built their own ad server. They just worked

1 on DFP in the first place.

2 Q Are you aware that the *New York Times* previously had an
3 in-house publisher ad server but then switched to DFP?

4 A Yes.

5 Q So that would be a switch going the other direction
6 compared to what you've identified?

7 A Yes. I would consider that more evidence of
8 substitution, but it's the other way.

9 Q I believe what you also said on direct examination is
10 that as more advertisers switched away from open-web display
11 ads to other types of advertising, that publishers had
12 various ways of responding on the publisher side. Is that
13 right?

14 A I'm not sure I said various ways of responding;
15 although, that's probably fair. Just that with network
16 effects, that would make the platform less attractive. So
17 other options would become relatively more appealing.

18 Q So for instance, one of those options I think you said
19 was to just offer more inventory via a mobile app instead of
20 a website?

21 A To sort of shift more of your business to -- meaning
22 more of your impressions, more of content, more of your
23 investment to apps.

24 Q That's not an option for a publisher that doesn't have
25 a mobile app, right?

1 A It certainly would be an option to launch an app. In
2 that case, as I think we talked about, that would be the
3 step they would have to take.

4 Q On any given day, even a publisher that has both a
5 mobile app and a website, they still have display
6 advertising inventory in both locations, right?

7 A Generally, yes, they have inventory in both. The
8 question would be how much and how much focus there is.

9 Q On the website, that's still inventory sitting on the
10 shelf that needs to be sold one way or another on any given
11 day, right?

12 A I mean, I don't really like the term "inventory sitting
13 on the shelf." They get impressions when a user comes. So
14 presumably, some users will still come. But based on their
15 focus, more of the users will go to their app.

16 Q And if we could just briefly look at paragraph 304 of
17 your report, and just let memo know when you're there.

18 A I'm there.

19 Q So in your work in this case, the only examples you
20 identified of a website publisher being able to shift more
21 of its inventory and content to a mobile app are listed
22 there under paragraph 304, right?

23 A I'm just looking because there's many paragraphs around
24 it. So there's things before it about what Facebook did,
25 maybe what Google has done, *New York Times* and ESPN has

1 done, Chick-fil-A has done. Three or four has more
2 examples. So there's several paragraphs with examples.

3 Q Okay. So in that paragraph, for instance, you
4 provide -- besides the *New York Times*, you provide the
5 example of a couple of travel companies, as well as a single
6 retailer, right, of shifting more content from a publisher
7 to an app -- from a website to an app?

8 A It looks like the examples in that paragraph, yes.

9 Q And just switching gears for a minute, I don't want to
10 go through every single one of the EMARKETER exhibits that
11 we looked at on your direct examination just because I don't
12 think we need to spend the time to do that.

13 But the EMARKETER definition of display advertising,
14 that includes social display ads?

15 A Yes.

16 Q And it includes in-app display ads?

17 A Yes.

18 Q And that includes native ads, right?

19 A Yes.

20 Q Okay. So just anytime that we see an exhibit in your
21 report that refers to the EMARKETER definition of display
22 ads, it includes all of those different types of advertising
23 in the statistics?

24 A Unless otherwise stated. I don't want to speak to all
25 the exhibits. But if it generally refers to EMARKETER and

1 has no more clarification, that would be right.

2 Q All right. Let's talk now about the hypothetical
3 monopolous test. You would agree that the hypothetical
4 monopolous test is one tool that can be used to analyze
5 whether a product market has been properly defined, right?

6 A The way I would say it is it's one of the tests. So
7 it's a tool that is commonly used. It's just not the only
8 standard.

9 Q One of your criticisms of Professor Lee's work in this
10 case is that he did not perform, in your view, a
11 sufficiently rigorous hypothetical monopolous test for any
12 of the relevant product markets, right?

13 A That's fair.

14 Q And you, yourself, have not performed a hypothetical
15 monopolous test in this case for any potential market,
16 correct?

17 A I don't agree with that. We discussed this in my
18 deposition, and I said I haven't done one using evidence
19 about substitution. I've done one using evidence about
20 prices as I talked about in my direct.

21 Q Okay. Other than that, you have not performed a
22 hypothetical monopolous test in this case?

23 A Other than the ones I presented in my direct based on
24 price evidence.

25 Q All right. And based on the work that you have done in

1 this case, it's your testimony that each of the proposed
2 relevant product markets that the plaintiffs have defined
3 are too narrow, correct?

4 A Yeah. Obviously, I made multiple criticisms, but I
5 think one would be that they leave out important
6 substitutes.

7 Q And you believe that social media and in-app
8 advertising are strong substitutes for open-web display
9 advertising; is that right?

10 A Yeah. Those are two different things, but yeah, I
11 think that's true of each.

12 Q At the same time, you think it's unlikely that
13 broadcast TV should be included in the categories of
14 advertising in the relevant product markets, right?

15 A It lacks the same sort of targeting. So I think that's
16 a reasonably important distinction.

17 Q You would acknowledge that advertisers sometimes buy
18 both broadcast TV ads and other types of digital
19 advertising?

20 A Buy both, yes.

21 Q And you haven't done any quantitative analysis in this
22 case to determine whether or not broadcast TV should be
23 included in the same product market as digital advertising,
24 right?

25 A That's fair, no quantitative work. I haven't seen any

1 evidence to suggest that it should be, but I have not done
2 independent quantitative work.

3 Q All right. One of the things that you said on direct
4 examination was that the plaintiffs' product market has not
5 properly accounted for header bidding; is that right?

6 A Yes.

7 Q You're aware, though, that the ad exchanges that are
8 included in plaintiffs' ad exchange market are, in fact, ad
9 exchanges that participate in header bidding, right?

10 A At least many of them, yes.

11 Q Okay. And I think you also testified on your direct
12 examination that direct deals compete with indirect deals,
13 right?

14 A Yes.

15 Q And so based on that, you concluded that direct and
16 indirect advertising deals should be included in the same
17 product market; is that right?

18 A Yes.

19 Q And the example that you gave was enhanced dynamic
20 allocation and how direct deals and indirect deals can be
21 placed in competition there?

22 A I think that was one of the bases on which I reached
23 that conclusion.

24 Q But you're aware that the competition that we're
25 talking about with -- where a direct deal and an indirect

1 deal is in competition, dynamic allocation is just done on
2 an impression-by-impression basis, right?

3 A That sounds right.

4 Q So if a publisher has a direct deal with an advertiser,
5 that direct deal is going to be fulfilled, just maybe not
6 with that specific impression, right?

7 A I mean, under EDA, there's a trade-off. Everything
8 becomes probabilistic. So I don't think we can say it
9 definitely will be filled. They take some risk under EDA.
10 The competition that determines that probability is
11 impression by impression.

12 Q But over the course of a period of weeks or even a
13 month, the expectation is that the direct deal is going to
14 be fulfilled, as well as, you know, any remaining
15 impressions will be filled programmatically, right?

16 A I think it's fair that the general expectation would be
17 the direct -- that direct deal would be fulfilled.

18 Q All right. Let's also take a look now at an exhibit
19 that you discuss on your direct examination, which is DTX
20 423.

21 And just with regard to ad exchanges, if we go down
22 sort of to the bottom quarter of this page, do you see the
23 bullet point that says -- this is a Google document, right?

24 A Yes.

25 Q At the bottom of that page, do you see the bullet point

1 that says, "Amazon not competing directly with
2 OpenX/AppNexus. Biggest threat to Jedi"?

3 A I see that.

4 Q So this is a recognition in a Google document that the
5 ad exchange, for instance, OpenX, is not in direct
6 competition with any products from Amazon, right?

7 A There's not enough there for me to know exactly what
8 this means. I see the words. In some sense, they're not
9 competing directly. It's a sub-bullet under a sub-bullet.
10 I'm not sure exactly what they mean.

11 MR. TEITELBAUM: All right. We can take that
12 document down.

13 BY MR. TEITELBAUM:

14 Q Let's move on to a slightly different topic, and we'll
15 talk about market power for a bit.

16 A Okay.

17 Q I believe you mentioned on your direct examination that
18 it was a critical fact for you that Google's prices were
19 lower than some of the companies that you've identified as
20 competitors. Is that right?

21 A I think what I said is that Google's internal
22 integrated paths that it offers are low price, and that's a
23 critical fact for me.

24 Q And another reason you've identified that -- you state
25 that Google lacks monopoly power in the relevant product

1 markets defined by plaintiffs. The ad tech industry is
2 dynamic, right?

3 A I'm not sure that was a primary basis I gave, but I
4 would agree that the dynamic competition is another factor
5 that goes -- that points against monopoly power.

6 Q And out of the companies that we've been discussing,
7 like TikTok, Meta, Amazon, Microsoft, only Microsoft owns a
8 publisher ad server that's capable of transacting open-web
9 display ads, right? I'll actually rephrase my question.

10 Only Microsoft owns a publisher ad server that
11 transacts open-web display ads currently?

12 A From that list of the companies that you gave, that
13 sounds right.

14 Q And only Microsoft owns an ad exchange that currently
15 transacts open-web display ad, correct, out of the companies
16 that we just discussed?

17 A From that list, that sounds right.

18 Q And only Microsoft owns a buy-side tool capable --
19 excuse me -- only Microsoft owns a buy-side tool that
20 currently purchases open-web display ads, correct?

21 A Now, you're going to have to remind me what your list
22 of companies was.

23 Q Actually, let me revise my question slightly.

24 Only Amazon and Microsoft own buying tools that
25 currently purchase open-web display ads, right?

1 A That sounds right.

2 Q And I believe you testified on direct that in your
3 opinion, Microsoft's advertiser ad network should be
4 included in the advertiser ad network market that the
5 plaintiffs have defined, correct?

6 A Yes.

7 Q And you have reviewed Professor Lee's rebuttal report
8 before testifying today; is that right?

9 A Yes.

10 Q And when Professor Lee calculated market shares in the
11 advertiser ad network market, including Microsoft's ad
12 network, Microsoft's ad network only had a 2 percent market
13 share, right?

14 A I don't remember.

15 Q All right. One of the things that you observed on your
16 direct testimony is that Google's investment in response to
17 competition is evidence that it lacks monopoly power; is
18 that fair?

19 A I mean, it's one of the pieces of evidence that I would
20 put in that category, yeah.

21 Q But even a monopolous has an incentive to invest in its
22 products if it views that as a profitable course of action,
23 right?

24 A I agree with that. That's why I spent time showing the
25 investments had been triggered by competition.

1 Q And you would agree that competition itself can lead to
2 lower prices in some circumstances, right?

3 A Yes.

4 Q And competition can be a force that means that firms
5 are incentivized to improve product quality in order to
6 capture sales and increase profits, right?

7 A It certainly can be, yes.

8 Q Let's talk about Google's accounting margins just for a
9 minute. You would agree that accounting margins are not a
10 reliable measure of market power, right?

11 A Accounting margins on their own, I agree with that.

12 Q You'd also agree that calculating economic margins is
13 nearly impossible to do, right?

14 A Calculating them exactly, yes. Figuring out their
15 sign -- given what we know about accounting margins, it can
16 be done. Getting the exact number, nearly impossible.

17 MR. TEITELBAUM: And with the Court's apologies, I
18 am going to use a food analogy here just for a minute.

19 BY MR. TEITELBAUM:

20 Q But are you familiar with the Costco rotisserie
21 chicken?

22 A Yes.

23 Q And so the reason that Costco has a rotisserie chicken
24 and it sells it as a pretty attractive price is because it
25 wants to get people into the store; they might buy other

1 things too, right? Is that a fair summary of maybe one of
2 their strategies?

3 A I honestly don't know. But I understand the concept,
4 and it could be.

5 Q All right. And you would agree that generally there is
6 a concept in business strategy that companies might lose
7 money on one thing in order to gain more longer-term
8 strategic benefits, right?

9 A Sure.

10 Q And so, for instance, you haven't ruled out the
11 possibility that one of the things that Google gets from its
12 ad tech products is, you know, value from scale and data
13 from operating its ad tech products in addition to just the
14 straight accounting profits, right?

15 A Yeah. I have not really weighed in in the discussion
16 of how big scale economies are. But I think you asked if I
17 ruled it out. So no.

18 Q Switching gears to AdX fees for a minute, I think you
19 observed that Professor Lee identifies some evidence that he
20 believes is direct evidence that Google possesses
21 substantial and sustained market power. Is that fair?

22 A That's fair.

23 Q And understanding that you disagree with Professor Lee
24 in this case, you agree that as a general matter, pricing
25 activity can be persuasive evidence of market power?

1 A Market power, yes. I, as an economist, have a view of
2 what monopoly power is versus market power, and I'm not sure
3 direct pricing evidence gets you there. The definition of
4 market power is prices above marginal courses.

5 Q And in fact, you -- when you testified a couple of
6 weeks ago in the *Kroger-Albertsons* case, you, at least for
7 the purposes of a merger case, said that direct evidence,
8 when it's available to use, can be the best way to answer
9 the question of whether or not a merger would harm
10 competition, right?

11 A That was direct evidence of the effects of a merger,
12 but yes.

13 Q And you would agree, as we discussed a little bit
14 before, that for the time period relevant to this case,
15 AdX's open auction take rate has remained at 20 percent,
16 right?

17 A Yes.

18 Q So that take rate specifically has neither increased or
19 decreased in response to competition or any other external
20 factor understanding that there are teeny-tiny deviations?

21 A That take rate, I agree, has not changed since the
22 DoubleClick days.

23 Q But it's your testimony that here in this case, that's
24 not an indicator of market or monopoly power?

25 A If anything, I see it as the opposite because there's

1 an allegation the market has such been monopolized and we
2 don't see a higher price.

3 Q So you don't think that just being able to maintain
4 prices at a particular level, regardless of competitive
5 conditions, is evidence of monopoly power?

6 A Not just the fact that they're maintained at a given
7 level.

8 Q As far as DFP's fees are concerned, I believe you
9 testified that you found it quite telling that those fees
10 have decreased over the past several years. Is that fair?

11 A Yeah. I think I said the fact that they're quite low
12 and falling.

13 Q And that's one of your bases for concluding that
14 publisher ad servers are not a well-defined product market,
15 right?

16 A That's fair.

17 Q And you also think that that fee information cuts
18 against Google having engaged in anticompetitive conduct?

19 A I don't know that I pointed to DFP fees by themselves.
20 I think the price information on the whole is telling about
21 whether Google is competing or doing something
22 anticompetitive.

23 Q Let's take a look at DTX 1887, which I will move into
24 evidence in an abundance of caution, but I think it's
25 already in.

1 THE COURT: I think it is too. Anyway, I assume
2 there's no objection.

3 BY MR. TEITELBAUM:

4 Q Dr. Israel, when you prepared this figure, did you
5 control for any external factors that might affect this
6 analysis?

7 A This figure is just average prices over time, so
8 nothing else is adjusted for.

9 Q So it's just a straight average?

10 A Correct.

11 MR. TEITELBAUM: All right. We can take that
12 down.

13 BY MR. TEITELBAUM:

14 Q You also discussed on your direct testimony that there
15 were pro-competitive benefits that resulted from integration
16 in the ad tech industry. Is that fair?

17 A Yes.

18 Q And by integration, you mean combining different ad
19 tech tools under the ownership of a single company?

20 A That's fair, yes.

21 Q So is it your opinion, then, that we'd get the maximum
22 benefit by having every single ad tech tool in the world
23 owned by a single company?

24 A Certainly not. Competition matters too, as I said.
25 But integration brings benefit. My opinion is having

1 competition among fully integrated players, unintegrated
2 players, and some in the middle is a healthy thing.

3 Q Are the benefits that you put forth from this
4 integration solely attributable to first look?

5 A No.

6 Q Are they solely attributable to last look?

7 A Solely attributable, no.

8 Q Are they solely attributable to UPR?

9 A They are not solely attributable to any of those
10 things.

11 Q So they're not solely attributable, then, to sell-side
12 dynamic revenue share, Project Poirot, or either of the ties
13 that have been referenced in this case, right?

14 A Not solely attributable to.

15 Q All right. Is it also a benefit of integration of
16 products that Google can balance the interests of
17 advertisers and publishers?

18 A Yeah, I think so.

19 Q And so when Google balances the interests of
20 advertisers and publishers, that means that Google is not
21 acting solely in the interest of its advertiser customers,
22 right?

23 A I think that's fair, not solely in their interest. I
24 pause for a second because there are long-term interests of
25 the product and the platform might benefit. So whichever

1 way it goes, it could benefit the advertiser customers, but
2 not solely them.

3 Q And similarly, when Google is balancing the interest of
4 its advertiser and publisher customers, it's not acting
5 solely in the interest of its publisher customers, right?

6 A Same answer.

7 Q But a company with only buy-side products has no
8 incentive to balance the interests of publisher customers
9 and advertiser customers, right?

10 A It doesn't have publisher customers explicitly. It has
11 some interest in -- I mean, I don't want to overstate it.
12 It has some interest in the interest of publishers because
13 there are still network effects in attracting advertisers.
14 So it's not sheer.

15 Q But generally speaking, the incentive is going to be to
16 act in the best interest of advertiser customers, right?

17 A Incentives would be to maximize its profits, but it's
18 going to focus more on the advertiser customers.

19 Q And so returning just briefly to the integration of
20 these products, I think the way you've described it is that
21 there's benefits from integrating a series of complementary
22 ad tech products. Is that right?

23 A I mean, I talked generally about benefits from
24 integration, but yeah, included in that would be integrating
25 inputs -- is the term I've been using -- that are

1 complements in terms of forming one of these paths.

2 Q So is it your testimony, then, that the two-sided
3 product market that you've put forth in this case is
4 comprised of a bench of products that are complements and
5 not substitutes?

6 A No.

7 Q But you would agree with me that when you're talking
8 about the pro-competitive benefits of integration, as you've
9 put it, you've described these products as complementary?

10 A Yes. They're inputs into making what I consider the
11 product, which is one of these paths. So inputs into
12 forming a product are complements for each other. But that
13 doesn't mean the market is made up of a bunch of
14 complements. The market is made up of a bunch of ad tech
15 methods for connecting impressions and advertisers.

16 Q Doesn't a properly defined product market have to be
17 made up of products that are close substitutes?

18 A Yes, and I think the different paths for connecting
19 advertisers and impressions are substitutes. They are built
20 up from inputs that complement each other.

21 Q So your testimony is that these products are both
22 complements and substitutes?

23 A My testimony is the proper products to consider are not
24 the components one by one but the ad tech stacks.

25 Q You have not attempted to quantify any of the purported

1 benefits arising from this integration of ad tech products,
2 correct?

3 A I think it's fair that I have not quantified specific
4 numbers attributable to integration.

5 Q So we can switch topics now.

6 You discussed on your direct examination that you have
7 concerns about any sort of theory of harm to competition
8 that might result in Google having to deal with its
9 competitors, right?

10 A I think what I said is -- I think it's likely harmful
11 to the competitive process to require a firm to deal with
12 its rivals.

13 Q But you're aware that Google actually touts its
14 interoperability with other ad tech products as a selling
15 point, right?

16 A Yes. I don't have a problem with firms choosing the
17 extent of interoperability. I have a problem with mandating
18 more than they consider optimal.

19 Q So let's just look briefly at what was used by the
20 defendants as Lee Demonstrative 6. It was used in the
21 cross-examination of Professor Lee.

22 So this is a slide from a presentation that Google made
23 to the Department of Justice where it noted that
24 interoperability is the key to Google's success.

25 Does that look right to you?

1 A That looks like what it says, yes.

2 Q And the title of this slide is "Ad Tech Built to Mix
3 and Match Like Legos"?

4 A I see that.

5 Q And what we have here on this slide is that Google Ad
6 Manager supports over 500 DSPs, 250 networks, and hundreds
7 of networks and exchanges, right?

8 A Yes.

9 Q And the reason that Legos is used as the analogy is
10 because they're easy to fit together and take apart, right?

11 A I mean, I didn't make it, but probably.

12 Q I'm sorry?

13 A I didn't choose the Legos. I don't know if -- I don't
14 recall this picture, but I think you're probably right, that
15 they are used because -- it's sort of what I've been saying,
16 that these different pieces of ad tech can fit together in
17 different ways.

18 MR. TEITELBAUM: All right. We can take that
19 down.

20 BY MR. TEITELBAUM:

21 Q And one of the reasons that you have concerns about
22 what you've characterized as forced interoperability is
23 because it requires Google to undertake technical work, for
24 instance, that it might not otherwise want to undertake. Is
25 that fair?

1 A That's certainly something I brought up. And the
2 broader concern is these affects on competition when you're
3 forced to share, but to the extent it requires costly
4 investments to do so, that heightens my concern.

5 Q Can we agree that implementing pretty much any software
6 engineering decision is going to require some amount of
7 technical work?

8 A In general, that sounds fair.

9 Q And so some amount of technical work occurs for pretty
10 much any software engineering decision regardless of whether
11 it harms competition or helps it, right?

12 A That sounds fair.

13 Q Implementing UPR required technical work?

14 A Yes.

15 Q And implementing dynamic allocation and enhanced
16 dynamic allocation required technical work?

17 A Certainly, yes.

18 Q And if we could take a look at DTX 1883, which I'll --

19 MR. TEITELBAUM: Which if it's not already in,
20 I'll move into evidence in an abundance of caution.

21 THE COURT: All right.

22 MR. ISAACSON: No objection.

23 BY MR. TEITELBAUM:

24 Q And so just looking at Figure 66 from your report, for
25 instance, we see over 1,500 display product launches each

1 year, right?

2 A Correct. Just to make sure everyone is clear, this
3 exhibit was from Google calendars where they count up the
4 number of sort of product launches broadly defined each
5 year, and I just reported their counts.

6 Q And presumably, each of these launches required some
7 amount of technical work?

8 A I would presume at least a little. There's a wide
9 variety of launches, but I think it's fair that some work
10 was required.

11 Q In evaluating Google's conduct in this case, is it your
12 opinion that Google has acted with the intention of
13 fostering competition?

14 A I think Google is a profit maximizing firm that has
15 operated as firms do, to compete in its own best interest,
16 but has done so in a pro-competitive way.

17 Q If we could, take a look at what's been marked for
18 identification as PTX 22, please.

19 THE COURT: Any objection to 22? It's the first
20 one in the book.

21 MR. ISAACSON: Yes. I'm looking.

22 No objection.

23 THE COURT: All right. It's in.

24 BY MR. TEITELBAUM:

25 Q If we could, just take a look at the cover page of this

1 exhibit.

2 So this is an email attached to a slide deck from May
3 of 2008, right?

4 A That looks right.

5 Q And you see that the slide deck is referring to the
6 initial launch of the Google AdExchange product?

7 A It looks like it. I don't know exactly the initial
8 launch or whether there was an earlier version. It
9 certainly appears to be a slide deck about an AdX launch.

10 Q And there's a reference to Larry there in the second
11 paragraph or the cover email. Based on the timing of this
12 exhibit, that's Larry Page, right?

13 A I don't know, but that sounds plausible.

14 Q All right. And what it says about the launch of the
15 Google AdExchange product is that Larry gave a cautionary
16 green light to proceed on developing the business case, "He
17 did not 100% agree to a fully open network -- suggested
18 Google get some baseline controls about which exchanges to
19 let in, competitors to restrict, and operating policy. But
20 in the end, it was a green light to develop the business
21 case."

22 Did I read that correctly?

23 A You did.

24 Q And is that -- as an economist, is that relevant to
25 your consideration as to whether or not Google has acted in

1 a pro-competitive manner in this case?

2 A I mean, I don't see how it would be. Again, the
3 discussion we've been having --

4 Q That's all right. So that's a no to my question.

5 A I don't see how it would affect any of my opinions.

6 MR. TEITELBAUM: All right. We can take that
7 down.

8 BY MR. TEITELBAUM:

9 Q One of the other factors you've identified as a basis
10 for your opinions about competition is that industry output
11 has consistently grown and outperformed projections, right?

12 A Yes, that's something I've discussed.

13 MR. TEITELBAUM: If we could, pull up Plaintiffs'
14 Demonstrative AG, please.

15 It's also in the binder towards the back, I
16 believe, if anyone wants to look at the hard copy. I guess
17 I should say towards the back.

18 BY MR. TEITELBAUM:

19 Q Just in the interest of time, Dr. Israel, if you want
20 to look at the electronic version.

21 A Okay. Sorry, I'm not finding it.

22 Q It's right at the end of the DTXs. And then we have
23 Lee Demonstrative 6, and then we have Plaintiffs'
24 Demonstrative --

25 THE COURT: It's sort of in the middle.

1 Is there any objection to this being shown?

2 MR. ISAACSON: No.

3 THE COURT: Why don't you just put it up on the
4 screen.

5 MR. TEITELBAUM: I think we're having trouble
6 accessing an electronic version at this moment, Your Honor,
7 but we will include it on the website tonight.

8 THE WITNESS: I have it now.

9 BY MR. TEITELBAUM:

10 Q And what you see here is charts of U.S. crude oil
11 production during the standard oil years, long-distance call
12 data during the AT&T years from 1935 to 1982, worldwide PC
13 shipments, Microsoft data from 1977 to 1999, and then your
14 figure about increasing display ad spending from 2008 to
15 2022, right?

16 A Yes.

17 Q So we can agree that increasing output on its own
18 doesn't tell us whether or not a product market has been
19 monopolized, right?

20 A I agree with that. I think I said that. It's an
21 indicator but, you know, there's lots of other work to be
22 done that I have tried to do.

23 Q And that's just because even a monopolous is going to
24 increase output if it finds it profitable to do so, right?

25 A I don't agree with that statement as you said it.

1 Monopolous generally profit by restricting output. It's
2 just that in a situation like this, one could define, you
3 know, an alternative world and show how the monopoly in some
4 of these cases was harmful. So these output pictures alone
5 certainly don't show harm. And on their own, they're good
6 for the industry. But there could be other evidence in
7 those cases that shows the harm.

8 Q All right. We can put that to the side, and we can
9 talk now about Google Ads and unique demand. And I'd like
10 to start actually by pulling up Israel Demonstrative 3 that
11 was used on your direct examination.

12 MR. TEITELBAUM: If I could impose on Mr. Spalding
13 for that.

14 BY MR. TEITELBAUM:

15 Q So I think one of the things you noted in your direct
16 examination is that a lot of the companies talk about having
17 unique demand, right?

18 A Yes.

19 Q But what we see in Israel Demonstrative 3, these are
20 public-facing sales materials or at least one -- we have one
21 public-facing securities filing as well, right?

22 A I'd have to go through them, but I think I agree
23 generally they are public-facing sales materials.

24 Q So they're not internal ordinary course decision-making
25 documents at least by and large, right?

1 A Again, I'm not sure I remember each of them, but I
2 think that's a fair overall characterization.

3 Q Do you believe that there's a meaningful distinction
4 between statements that are made out to the public versus
5 internal communications for the purposes of conducting
6 business?

7 A Yes.

8 Q And you're aware that there are several -- several may
9 be an understatement -- but several Google documents that
10 conclude that the main or only reason that AdX can charge a
11 20 percent take rate is its access to Google Ads' unique
12 demand?

13 A Sorry. Can you ask that once more?

14 Q Sure. You're aware of internal Google documents that
15 conclude that the main or only reason that AdX can charge a
16 20 percent take rate is its access to Google Ads' unique
17 demand, right?

18 A Certainly, I'm aware of documents that discuss the role
19 of Google Ads' demand and pricing. I think a lot of them --
20 the majority of them that I've seen I've looked at, and they
21 support my view that a lot of that is driven by the
22 relatively low Google Ads' price. But certainly, there are
23 documents that talk about that language.

24 Q Let's just briefly take a look at what's already in
25 evidence as PTX 719, which is also in the binder. And if we

1 could, go to the page ending in 004. And then you see at
2 the bottom, there's an email from Chris LaSala from December
3 of 2018?

4 A Yes.

5 Q And Chris LaSala was one of the lead Google executives
6 in charge of sell-side products for many years at Google,
7 correct?

8 A Yes.

9 Q And what he says is, "This statement is consistent with
10 the notion that we can only retain 20% rev share given AdX
11 mostly brings unique demand in GDN. Something to think
12 about as we think about AdManager SB taking network like
13 margins. I'm still convinced that is the only reason we can
14 sustain 20%."

15 Is that what it says there?

16 A It is.

17 Q And this was not a public-facing sales document,
18 correct?

19 A That's correct.

20 Q And similarly, if we could actually look at what's been
21 marked for identification -- so it's not yet in evidence --
22 as PTX 298.

23 THE COURT: Any objection?

24 MR. ISAACSON: No objection.

25 THE COURT: All right. It's in.

1 BY MR. TEITELBAUM:

2 Q And so this is an email thread among various Google
3 employees. And Scott Sheffer, who testified last week, is
4 in the CC line. Do you see that?

5 A I do.

6 Q And the subject line for this email is "Materials for
7 AWBid & Header Bidding Update," right?

8 A Yes.

9 Q And so in discussing whether or not and how to
10 implement AWBid, one of the things that Colin Goulding says
11 at the bottom is -- and it's the bottom email, the first
12 paragraph. And then the last sentence there he asks, "Does
13 this leave service as the main competitive lever on the
14 sell-side? If so, we lose."

15 Did I read that right?

16 A You did.

17 Q So that's a recognition that at least it wasn't
18 customer -- at least according to this employee, it wasn't
19 customer service that was keeping Google competitive on the
20 sell-side, right?

21 A I don't remember the full document. So I don't want to
22 speculate further on the full meaning, but you read the
23 sentence right.

24 Q All right. You're also aware that publishers have
25 concluded that they need to use DFP to get access to Google

1 Ads demand?

2 A I mean, I know there's been publisher testimony that a
3 reason that they have stuck with DFP -- at least some
4 publishers have said is it gets them access to AdX.

5 Q And are you also aware of testimony that says the
6 reason that they need access to AdX is because it's the best
7 and most meaningful way to get Google Ads demand?

8 A You know, I think I recall some testimony that said
9 that.

10 Q All right. And so is it your testimony today that
11 those executives who are running those publishers are
12 mistaken?

13 A No, not that they're mistaken. Again, all of this is
14 consistent with my view that Google has made it very
15 inexpensive on the whole to get demand from Google Ads'
16 buyers all the way to publishers.

17 Q All right. So you believe that publisher testimony
18 about their inability to switch away from AdX is consistent
19 with your opinion that Google has made it easy and
20 inexpensive?

21 A I mean, you can't talk about demand -- the amount of
22 demand that Google products bring without talking about what
23 Google charges for them. So if a company has a good source
24 of demand that it's charging a low price for, it's going to
25 have a lot of that demand. And the other side of the market

1 is going to find that valuable, but that's competition.

2 Q Let's talk about things from the advertisers'
3 perspective for a moment with respect to Google Ads.

4 So you're aware that Google Ads has access to some data
5 advantages that other buying tools don't necessarily have
6 access to? It's a differentiator for Google Ads?

7 A All right. Can you give me that once more?

8 Q You're aware that Google Ads has some access to some
9 data that can be a product differentiator for it compared to
10 other buying tools?

11 A I'm probably going to want to talk about that in
12 specific. I mean, different ad tech providers have
13 different data that they use as an advantage. So that's
14 probably true with some data, but to say anything more
15 substantive, I would want more specifics.

16 Q Are you aware that Google Ads has some algorithms that
17 other ad buying tools don't necessarily use?

18 A Again, I'd want to look at specifics. I'm sure it's
19 true that different buying tools tout different data and
20 different algorithms, but I can't say more than that without
21 more specifics.

22 Q And you're aware that there are even some large
23 advertisers that view Google Ads as a particularly unique
24 and desirable product?

25 A I think it's true that there are large advertisers who

1 find Google Ads to be a desirable product.

2 Q All right. And another one of those reasons is, for
3 instance, click prediction can be relatively good for Google
4 Ads?

5 A I think Google Ads has high quality click prediction.
6 I mean, other tools do too. But I certainly think click
7 prediction is something Google Ads, in my experience, does
8 well and competes with.

9 Q And so that's consistent with Mr. Lipkovitz' testimony
10 at his deposition, which I believe you reviewed, where he
11 gives the example of a large advertiser who chooses to buy
12 through Google Ads as opposed to other buying tools just
13 because Google Ads' click prediction is better, right?

14 A I don't recall the specifics of the deposition, but I'm
15 sure there are advertisers who find some of those Google
16 Ads' services to be high quality.

17 Q And as I believe you noted in your report, there's also
18 a link between using Google Ads to buy open-web display and
19 using Google Ads to buy on search, YouTube, Gmail, and other
20 Google properties, right?

21 A You can buy those things through Google Ads, and there
22 are Google Ads purchasing methods that combine them.

23 Q So Google allows integration of display advertising
24 into campaigns that involve these other types of
25 advertising, right?

1 A Yes.

2 Q So that is one reason why even a large advertiser might
3 not be so quick to switch their spend from Google Ads to
4 other buying tools, right?

5 A I'm a lot less sure there because there is a lot of
6 buying tools that let you make combinations like that.

7 Q So in other words, you don't believe that Google Ads
8 possesses those differentiators compared to other buy-side
9 tools?

10 A I think Google Ads offers high quality products I've
11 studied before that allow good buying campaigns that
12 advertisers like, but there's a lot of buying tools using a
13 lot of data in similar ways.

14 Q All right. If we could, pull up DTX 1986, which I
15 believe is already in evidence. It's Table 19 from your
16 report.

17 So I have a few questions for you about this analysis.
18 This is one of the tables supporting your analysis that
19 taking away Google Ads demand would only result in a
20 2.6 percent reduction in publisher revenue. Is that right?

21 A 2.6 under one of the columns that I talked about on
22 direct. So really, this was a reaction to something
23 Professor Lee had done, and I talked about it on direct.

24 Q Is this analysis confined to open-web display ads as
25 the plaintiffs have defined that term?

1 A I don't recall as I sit here. It was intended to work
2 directly off of what Professor Lee had done and just make
3 the three modifications I talked about. I don't recall, as
4 I sit here, whether it was refined only to open-web display.

5 Q All right. So let's -- I just have some questions I'd
6 like to take sort of a hypothetical advertiser that's
7 included -- that might be included in this table.

8 So I believe you've said that large advertisers are
9 significantly more likely to multi-home than smaller
10 advertisers. Is that fair?

11 A I think that's fair.

12 Q And consistent with that, let's take a large advertiser
13 and just assume for the sake of argument that it multi-homes
14 but only through Google Ads and TikTok.

15 Are you with me so far?

16 A Sure. Although, here I was focusing on the ability to
17 multi-home across a range of buying tools, including other
18 buying tools that would buy open-web, but we can do the
19 hypothetical.

20 Q All right. Well, we can -- let's actually -- we can
21 change the hypothetical then. Let's do Google Ads and The
22 Trade Desk.

23 A Okay.

24 Q And so let's assume that a small local newspaper stops
25 using AdX and, therefore, loses access to most Google Ads'

1 demand at that moment, right?

2 A Again, I don't think it would actually lose access
3 given the options that would be open to advertisers.

4 Q So you said it on your direct testimony, and you have
5 figures in your report that confirm that as of 2023, I
6 think, about 87 percent of Google Ads' spend is on AdX.
7 Does that sound about right?

8 A Yes.

9 Q So at the exact moment that that local newspaper
10 switches away from AdX, it's losing access to 87 percent of
11 Google Ads' demand, right?

12 A No, not if those advertisers are using other tools.

13 Q All right. So what you're assuming then -- you've
14 anticipated my next question -- is that that advertiser is
15 going to -- that publisher is going to be able to
16 instantaneously find that advertiser on another buying tool,
17 right?

18 A Not instantaneously find a particular advertiser. All
19 I'm saying here is that if an advertiser uses The Trade
20 Desk, it can bid on that same inventory.

21 Q And you're saying that that switch over between getting
22 demand from Google Ads and getting demand from The Trade
23 Desk is going to be instantaneous?

24 A I don't think I said instantaneous. I think I've said
25 if it does or has the ability to use multiple tools, it can

1 bid through The Trade Desk.

2 Q So in other words, you're assuming that somehow that
3 advertiser or those advertising dollars are going to find
4 that publisher even if the tools switch, right?

5 A Again, I'm not assuming it for all advertisers. But I
6 mean, we've heard the mechanism in here. The inventory
7 comes up. Most publishers use multiple exchanges. The same
8 advertiser can bid through The Trade Desk and another
9 exchange and can get into a header bidding auction on DFP
10 for the same inventory.

11 Q All right. But you've actually done no analysis or
12 case studies to confirm that that's actually what would
13 happen for a newspaper that switches away from AdX, right?

14 A I mean, this is the analysis of what happens when
15 certain ones are lost. I don't think I presented a case
16 study of a certain advertiser bidding. I presented the
17 evidence that they multi-home and then the evidence of how
18 the auctions work that would indicate they can still bid on
19 that same inventory.

20 Q All right. But you don't have any direct evidence that
21 a particular advertiser is going to switch all of its
22 advertising dollars from Google Ads to another buying tool,
23 right?

24 A I don't think I'm saying it would switch all of its
25 advertising dollars. I'm just saying that there are

1 multiple paths through which it has access to that same
2 inventory.

3 Q All right. Let's assume just for these questions that
4 we can take your analysis at face value and you provide a
5 2.6 percent -- a negative 2.6 percent revenue effect in that
6 column there. Right?

7 A In that column, yes.

8 Q And so you're not saying that each and every DFP
9 publisher would loose precisely 2.6 percent of its revenue,
10 right?

11 A No. This is the overall revenue effect as a
12 percentage, not publisher by publisher.

13 Q So some publishers presumably then would lose more and
14 others would lose less?

15 A In this column, that's an average. So it seems like
16 that must be right.

17 Q And just for clarity sake, the negative 2.6 percent is
18 including direct deals as well, right?

19 A Right. So the publisher has some of those. So it
20 includes all the revenue, and it's 2.6 percent in total.

21 Q And you don't know from this analysis whether the loss
22 of Google Ads' demand would be particularly devastating for,
23 for instance, a small local newspaper that operates on a
24 small budget, right?

25 A I don't -- this analysis is not an analysis of a

1 particular publisher. This analysis is an analysis of a
2 total revenue effect for the purposes of assessing
3 competition. Is that a big enough effect that it would
4 prevent other ad servers from being able to compete with DFP
5 or with other parts of the ad tech's deck?

6 Q So that's a no? You don't know from this analysis the
7 answer to that question?

8 A This is not an analysis. So that's a no. This is not
9 an analysis from any specific publisher from this.

10 Q But you would agree with me that this 2.6 percent
11 revenue effect overall could still include a very
12 significant percentage of any particular publisher's
13 revenue, right?

14 A I think -- I agree that specific publishers might want
15 to stay with what they have. Right now I've explained why I
16 think what Google is doing is pro-competitive overall.
17 They're very well probably are publishers who would stick
18 with Google.

19 Q Let's talk about -- now we've talked a little bit about
20 Google Ads and AdX. Let's talk about AdX and DFP now.

21 A Okay.

22 Q Let's just say hypothetically that AdX completely
23 refused to buy any impressions whatsoever from a publisher
24 unless that publisher used DFP as its ad server.

25 Are you with me so far on this hypothetical?

1 A On the hypothetical, yes.

2 Q So in this hypothetical, there's no such thing as AdX,
3 right?

4 A Okay.

5 Q And is it your testimony that AdX completely refusing
6 to buy an impression unless the publisher uses DFP as its ad
7 server would have no negative effect on competition?

8 A It's a different hypothetical than exists. So I have
9 to think about that for a minute.

10 Q All right.

11 A It's not one I've studied. So it's not the situation
12 as it exists. So it actually isn't one that I have studied.
13 So I would rather not try to figure out my answer to that on
14 the fly.

15 Q Would you agree with me that under some circumstances,
16 tying two products together can harm competition?

17 A Yeah. There's a pretty specific set of
18 circumstances -- monopoly power in one market, tying the
19 products together leads to exit -- you can actually show
20 harm. But yeah, there's certainly economic research that
21 indicates that under a set of circumstances, tying can
22 create harm.

23 Q And stepping away from the hypothetical now and turning
24 specifically to your work in this case, your testimony is
25 that one of the reasons that AdX and DFP are not tied

1 together in an anticompetitive manner is because of AdX
2 Direct, right?

3 A Certainly, it's a reasonable -- I wouldn't call this a
4 tie and why there is demand available to other ad servers.
5 I mean, it's certainly not the only thing I've pointed to,
6 but it's part of the facts that I have considered.

7 Q Is it your view that AdX Direct is an effective
8 alternative to accessing DFP with real-time bids?

9 A Real-time bids? I mean, AdX Direct is what it is.
10 It's a way to get AdX demand in real-time. I don't think --
11 I don't think it gives bid.

12 Q All right. And do you agree that as of 2023, less than
13 1 percent of AdX's revenue came from AdX Direct?

14 A Well, that sounds right.

15 Q If a product is not being used very much, that can
16 indicate that it's not an effective product, right?

17 A It could. It could also indicate that what it's
18 competing with is very effective.

19 Q You're also aware that industry participants have
20 testified in their depositions that AdX Direct was not an
21 effective alternative to access to AdX with real-time bids,
22 right?

23 A I mean, I recall some testimony about -- from industry
24 participants about why they didn't use it. I don't recall
25 the specifics of what they said.

1 Q But it wouldn't surprise you to know that you relied on
2 a deposition from James Avery at Capital, for instance, who
3 said that AdX Direct was an effective alternative. Does
4 that sound right?

5 A Something to that effect. To recall what he said, I'd
6 have to look at it. I know there's testimony about people
7 giving various reasons in those cases why they didn't use
8 AdX Direct.

9 Q But you disagree with that testimony; you think AdX
10 Direct is effective?

11 A AdX Direct is a way that third-party ad servers could
12 get precisely what DFP got from AdX for years and years. So
13 I think it's certainly not a tie. There were ways to get
14 it, and that's one of the relevant facts. I certainly think
15 plaintiffs haven't shown that that distinction harms
16 competition. I think those are the opinions I'm offering.

17 Q You said precisely what DFP got, but didn't you say a
18 few minutes ago that DFP gets real-time bids but other
19 publisher ad servers don't from AdX?

20 A You said for years and years. Today there's a Unified
21 First-Price Auction which AdX participates in that auction.
22 Prior to that, what DFP got from AdX in terms of ads as
23 opposed to bids is exactly what others would have gotten.

24 Q So is it your testimony that as of today, AdX is
25 bidding in real-time for open-web display ads into all

1 publisher ad servers?

2 A No. What I said, just to make sure I'm clear, today
3 AdX is participating in an auction, a Unified First-Price
4 Auction on DFP. Prior to that, what AdX was doing was
5 giving DFP a yes or a no about whether to serve an ad, which
6 is exactly what AdX Direct would have provided.

7 Q So it's your testimony that prior to the Unified
8 First-Price Auction, AdX was only giving DFP a yes or no?

9 A Yes.

10 Q Let's talk about Admeld for a few minutes.

11 If a firm acquires a disruptive rival, that acquisition
12 can reduce competition, right, a general matter?

13 A It certainly is a theory that can be investigated in a
14 merger case, and it may or may not be the case in a given
15 merger.

16 Q Admeld was offering yield management technology at the
17 time of its acquisition, right?

18 A Yes.

19 Q And it was also developing real-time bidding, right?

20 A That sounds right.

21 Q And Admeld's real-time bidding revenue actually
22 surpassed its traditional yield management revenue in
23 September of 2011, right?

24 A I don't know.

25 Q If you want to refresh your recollection, you can take

1 a look at paragraph 740 of your report.

2 A Okay. Yeah, that helps.

3 Q Okay. So you agree that as of September 2011, AdMeld's
4 real-time bidding revenue surpassed its traditional yield
5 revenue?

6 A Yes. I recall it from my report and the citation here.

7 Q All right. And at this same time period, AdX was
8 offering real-time bidding technology but only into DFP,
9 right?

10 A Again, this is -- well, it relates to an earlier
11 discussion. What AdX was offering was what it offered
12 through dynamic allocation.

13 Q All right. And so for that reason, Admeld's provision
14 of real-time bidding posed a competitive threat to AdX,
15 right, as a competitor in the AdExchange market?

16 A I don't have enough basis to say that's true, but
17 that's the sort of thing that you would do in a very
18 detailed merger investigation. I haven't seen evidence to
19 show that one way or another.

20 Q Let's take a look at what's been marked for
21 identification as PTX 56, which we'd offer now.

22 THE COURT: Any objection?

23 It's at the beginning of the book.

24 MR. ISAACSON: No objection.

25 THE COURT: All right. It's in.

1 BY MR. TEITELBAUM:

2 Q So this is a cover email in front of a slide deck.

3 Do you agree with that, Dr. Israel?

4 A It looks right.

5 Q And so if we look at the page ending in Bates No.

6 783 --

7 MR. TEITELBAUM: And if we could, blow up that
8 table, please.

9 BY MR. TEITELBAUM:

10 Q Do you see Admeld, PubMatic, and Rubicon listed there
11 in the exchange category to the right of Google AdExchange
12 in the bottom right?

13 A I do.

14 Q And then if we look at the Bates number ending in 802,
15 do you see that under key -- And I'll wait until you're
16 there. It's also on the screen if you prefer.

17 A Oh, okay.

18 Q Do you see the last bullet point under "Key Stats" --

19 This is a slide that says, "Competitive Intel:
20 Rubicon.

21 -- that says, "Still no support for RTB"?

22 A I see that.

23 Q So this is observing that as of the time of this slide
24 deck, Rubicon did not support real-time bidding, right?

25 A It was a limited beta testing just to be clear, but it

1 seems to say no support as of that date.

2 Q Okay. And then if we can, go to the next page.

3 Real-time bidding is actually listed as a key strength
4 of Admeld, right?

5 A It does say that.

6 Q And so at the time of the acquisition of AdMeld by
7 Google, do you think that Admeld posed a competitive threat
8 to Google?

9 A Again, to say that about Admeld in particular, I'd want
10 to do what I do when I do a full merger investigation, which
11 is months and months of work similar to what we've done here
12 to assess the effects of the merger. I just haven't seen
13 that sort of evidence presented by anybody in this case. I
14 haven't done it independently. I just haven't seen anything
15 that I would expect to actually answer a question like that
16 in a merger context.

17 THE COURT: We will take our break now. We will
18 recess until 4:30.

19 (Brief recess taken.)

20 THE COURT: All right.

21 MR. TEITELBAUM: Thank you.

22 BY MR. TEITELBAUM:

23 Q So, Dr. Israel, we were talking about Admeld when we
24 broke. So I just have a few more follow-up questions about
25 that.

1 So you did analyze the acquisition of Admeld as part of
2 the conduct that's alleged in this case, right?

3 A Yes.

4 Q And so do you have an opinion as to whether or not at
5 the time of the Admeld acquisition Admeld was a competitor
6 of AdX?

7 A I think given that it offered some real-time bidding,
8 then broadly defined it was an ad tech competitor.

9 Q All right. It was an ad tech competitor but not
10 specifically an ad exchange competitor?

11 A Again, that's not how I would analyze the markets. I
12 think it would have been an ad tech competitor.

13 Q So you agree then that the Admeld acquisition was the
14 acquisition of one of Google's ad tech competitors?

15 A I think that's fair. I think it was investigated by
16 the competition agencies because it involved firms that
17 competed to some degree.

18 Q Right. So that's a yes to my question?

19 A Yeah, I think it was the acquisition of one of many ad
20 tech competitors.

21 Q All right. If we could just back up for a minute and
22 talk about geographic market for a second.

23 You would agree with me that DoubleClick for Publishers
24 or DFP permits the serving of ads in a variety of languages,
25 correct?

1 A Yes.

2 Q And AdX permits -- will run auctions for ads in a
3 variety of languages?

4 A Yes.

5 Q And the same in terms of purchasing ads by DV360 and
6 Google Ads in a variety of languages?

7 A Yes.

8 Q In an auction in DFP, an American advertiser can
9 compete against a Croatian advertiser for a particular
10 impression, right?

11 A Yes.

12 Q One of the things that you criticized Professor Lee's
13 work for is ignoring product quality in his analysis, right?

14 A Excuse me. I think what I recall is noting that
15 analysis of prices was not quality adjusted.

16 Q You, yourself, have never calculated a quality adjusted
17 competitive price for a particular market, correct?

18 A Quality adjusted? You know, I think what I said more
19 generally is that computing the specific competitive price
20 is something that I don't generally find useful.

21 Q And then what about computing a quality adjusted price?

22 A I think it would apply there as well.

23 Q All right. You don't think it's useful?

24 A I think -- we talked about this at some length in my
25 deposition. I think it's sort of like your question about

1 computing exact economic profits. I think it's difficult
2 and not usually the most useful way to decide if a
3 particular conduct has been harmful.

4 Q Let's return briefly to the subject of Facebook.

5 MR. TEITELBAUM: And if we could, bring up what, I
6 believe, is already in evidence as PTX 1710.

7 BY MR. TEITELBAUM:

8 Q So in addition to the previous document that you saw,
9 do you see about seven lines from the top this Facebook
10 document is observing that header bidding, therefore,
11 threatens Google's monopoly which ensured AdX always won the
12 great majority of impressions?

13 A I see that.

14 Q All right. So this is another example of what is, in
15 your view, one of Google's most significant competitors
16 referring to Google as a monopoly, right?

17 A I'm not of the context -- I don't recall who this is or
18 what this text is. But it seems to be someone at Facebook,
19 and you read the sentence correctly.

20 Q All right. Let's take a look at what's already in
21 evidence as PTX 1650 as well, which I think is also at the
22 back of the binder. And if we could, look at the Bates
23 number ending in 3044.

24 And if you need to look at the cover as well,
25 Dr. Israel, you see that this is a Trade Desk slide deck?

1 A It looks right.

2 Q And then what these Trade Desk materials observe is
3 that Google's ad server is used by almost all publishers
4 with a 77 percent market share in 2015. Do you see that?

5 A I see that.

6 Q So this is another example of one of the large
7 competitors that you've identified observing a large market
8 share for Google, right?

9 A Again, I don't know the full context, but it seems to
10 be in some context someone at The Trade Desk making that
11 computation.

12 Q And then if we could, finally, turn to --

13 And that's a reference to a publisher ad server market
14 there, right?

15 A It uses the phrase "market share." Again, I have no
16 broader context on what all they have done here.

17 Q And it's a reference to Google Ads' ad server being
18 used by almost all publishers, 77 percent of market share,
19 and then we see the DoubleClick for Publisher's logo to the
20 right?

21 A That's right.

22 Q All right. And then the last Facebook document. If we
23 could, please pull up what's already in evidence as PTX 580.

24 So on the cover here, we have an email from Brian
25 Boland from February of 2018. Do you see that?

1 A Yes.

2 Q And then if we go to the Bates number ending in 799 --

3 MR. TEITELBAUM: I don't think we're quite there
4 yet. It's the Bates number ending in 799. Yeah, there we
5 go.

6 BY MR. TEITELBAUM:

7 Q So this is a discussion within Facebook about scale.

8 Do you see that?

9 A I see the reference to scale.

10 Q All right. And what this document says towards the
11 bottom of that paragraph that starts "supply-acquisition"
12 is, "We estimate that 88% of our addressable market flows
13 through 3rd party vendors and 12% flows through home grown
14 solutions." And then there's a reference to a document, and
15 then, "There is always ad tech between us and the impression
16 we want to buy, which we have no control over."

17 Do you see that?

18 A I do.

19 Q So this is a reference by Facebook to the fact that
20 they do not seem to feel like they are very much in control
21 of their purchase of ad impressions, right?

22 A I really don't know the context for this. Given that
23 Facebook controls its own ad tech, I don't know what they're
24 talking about.

25 Q All right. Let's take a look at the next page ending

1 in 800. And under, "The dynamics of accessing inventory via
2 waterfall technology," Facebook observes, "We are beginning
3 to see a cap in access to publisher supply on a per
4 publisher basis of -14%."

5 So once again, this is Facebook expressing that it's
6 having difficulty getting access to publisher supply, right?

7 A I assume that means approximately 14 percent.

8 Q Approximately 14 percent, yes. Thank you.

9 A Again, I see the sentence. But without reading the
10 whole thing and seeing the study, I can't add anymore to it
11 than that.

12 Q All right. And then if we go to the Bates number
13 ending in 802, do you see, "The recommendation: Partner
14 with ad tech."

15 "We recommend partnering with ad tech, with Google
16 being the most important partner. Google already dominates
17 the market. In 2017 by addressable revenue (excluding
18 direct) we estimate that DFP/AdMob accounted for 39% of app,
19 72% of web and 40% of video."

20 Did I read that right?

21 A You did.

22 Q What it says here is that, "Although publishers want an
23 alternative, the likelihood of a credible replacement
24 emerging is extremely low."

25 A I see that followed by Google being the company making

1 credible long-term investments in technology and service.

2 Q And when Facebook is talking about having problems
3 accessing inventory, they're not talking about one market
4 for all digital ads, right?

5 A I don't think they're making a comment about market
6 definition one way or the other. Generally, private firms
7 wouldn't do that.

8 Q Well, they're referring to -- specifically to -- they
9 make a differentiation between app, web, and video, right?

10 A They list percentages that way, but you can do that for
11 different products. I don't think they're making any
12 comment about whether they're in the same market or not.

13 Q All right. The last topic. I believe you testified
14 that one of the important sources of information for your
15 work in this case has been your review of ordinary course
16 Google documents. Is that fair?

17 A Yes.

18 Q You would agree that those can be an important source
19 of information about Google's -- about the competitive
20 dynamics and about Google's decision-making?

21 A That's a big statement. Certainly, documents can be
22 informative. It depends on the context, who wrote them,
23 what you make of them, but certainly, documents can provide
24 information if interpreted properly.

25 Q If we could, pull up what has been marked for

1 identification as PTX 850.

2 MR. TEITELBAUM: We're confirming whether it's
3 already in.

4 THE COURT: It's in. It's in.

5 MS. WOOD: All right.

6 BY MR. TEITELBAUM:

7 Q Dr. Israel, in your work on this case, have you seen
8 this document before?

9 A Not that I recall.

10 Q All right. So are you aware of Google's policy and
11 training materials called Communicate with Care?

12 A I don't think so.

13 Q And so you're not aware, then, that Google employees in
14 their written communications are instructed to avoid certain
15 terminology and use certain phrases?

16 A Not that I recall. I may have seen reference to it in
17 the press, but this is not really the sort of document that
18 affects any of my economic analysis. So I don't know much
19 about it.

20 Q All right. So it's not relevant to your -- is it
21 relevant to your analysis of Google documents that Google
22 employees are instructed, "Don't try and define a market or
23 estimate our market share"?

24 A Not really because defining a market, as a competition
25 economist, is a pretty technical thing. So I think my

1 general answer is I don't think firms defining markets tells
2 me much about antitrust markets. So whether Google
3 employees do it or don't do it probably wouldn't affect how
4 I would do it.

5 Q All right. So you don't think that Google's ordinary
6 course documents are informative for market definition
7 purposes?

8 A That's a different statement. They can be informative
9 if they give me economic information about who the subsidies
10 are or who they compete with or what their strategy was. I
11 just don't find it very useful generally when companies say,
12 "This is our market," because, you know, as we've discussed,
13 it's a pretty specific thing to define an antitrust market.
14 I usually find that's not what employees are doing.

15 Q So you don't think it's informative that Google
16 employee are instructed, "We've got lots of competitors.
17 Google competes with every company that lets users access
18 information and every company that sells advertising"?

19 MR. ISAACSON: Objection. Cumulative. Asked and
20 answered.

21 THE COURT: Sustained.

22 MR. TEITELBAUM: I'll pass the witness.

23 THE COURT: All right. Mr. Isaacson.

24 REDIRECT EXAMINATION

25

1 BY MR. ISAACSON:

2 Q Just a few things, Dr. Israel. You were asked does it
3 matter to you that -- you were asked whether the *New York*
4 *Times* can use Facebook tools to sell an impression for the
5 *New York Times*. Does that question matter to your economic
6 analysis?

7 A No.

8 Q Please explain why.

9 A Because as I tried to describe, the way I think you
10 should analyze the market is technology tools that create
11 links between advertisers and impressions. And so one way
12 an advertiser can find an impression is on the *New York*
13 *Times* for which there is a set of technology tools that
14 compete to make that match.

15 Another way an advertiser can find an impression is on
16 Facebook for which there is a different set of tools that
17 can make that match.

18 And all of those tools compete with each other.

19 Q All right. You were asked questions to name off the
20 top of your head other publisher ad servers. Oh, I'm sorry.

21 First of all, you were asked off the top of your head
22 to talk about which publishers were using apps. Can you
23 look at paragraph 300 of your report, page 233?

24 A Yes.

25 Q And do you see there in the second sentence, "For

1 example, of the 100 largest web publishers, according to
2 Comscore data, only three do not have facts"?

3 A Yes.

4 Q That was something you found from your investigation,
5 correct?

6 A Correct.

7 Q But you were also asked to rattle off names of other
8 firms that had their own publisher ad servers.

9 Could you look at page 240 of your report?

10 And if you look at paragraph 379, do you see the names
11 of Facebook, Pinterest, and eBay?

12 A Sorry. What paragraph?

13 Q Footnote 379 on page 240.

14 A Yes.

15 Q And then do you see in footnote 382, you also listed
16 Amazon, Reddit, LinkedIn, and Snapchat?

17 A Yes.

18 Q And then in footnote 386 on the following page, you
19 cite the deposition of Mr. Avery indicating that Kevel and
20 his predecessor worked with more than 200 different
21 customers to provide APIs for the purposes of launching
22 bespoke publisher ad servers, including Ticket Master;
23 Edmonds; Bed, Bath & Beyond; and Klarna, correct?

24 A Yes.

25 Q All right. Then you were asked a series of questions

1 about Facebook, Amazon, TikTok, and Microsoft and about
2 whether they offered ad technology for open-web. And you
3 understand Facebook, Amazon, and TikTok don't fall under the
4 definition of open-web?

5 A Correct.

6 Q All right. So you were pointing out Microsoft as the
7 remaining competitor?

8 A I think I also pointed out that Amazon does have
9 buy-side tools that buy open-web.

10 Q All right. Can we turn to page 666 of your report, and
11 at the top --

12 MR. ISAACSON: And I would ask this to be a
13 demonstrative. I think it would be 6.

14 BY MR. ISAACSON:

15 Q This is from your report. Now, are these the relevant
16 competitors that you listed in a demonstrative with all of
17 these names? Some of these names you've listed in your
18 testimony; some of them you haven't.

19 MR. TEITELBAUM: Objection. Leading.

20 THE COURT: Sustained.

21 BY MR. ISAACSON:

22 Q All right. Tell me what this chart is.

23 A I mean, this -- at the bottom it has what would be the
24 shares in the various markets as plaintiffs define them if
25 you consider all of the different ad tech. So I didn't

1 present those in my testimony. And then above are the
2 various firms that provide the competing ad tech that would
3 lead to those shares.

4 Q And if we look at page 665 of your report at the
5 bottom --

6 MR. ISAACSON: I would mark this as
7 Demonstrative 7.

8 BY MR. ISAACSON:

9 Q Plaintiffs defined a lot of competition out of the
10 proposed markets. This was another list of competitors in a
11 demonstrative. Would you explain what this is?

12 A I mean, this is -- again, it sort of highlights the
13 competitors who are included in plaintiffs' market, but then
14 it lists all the ones that are not included. There are
15 firms that provided ad tech, so they facilitate these
16 matches between advertisers and impressions that are not
17 included as competitors in plaintiffs' markets.

18 Q You discuss the example of Costco rotisserie chicken
19 and the notion that a firm would have an inexpensive product
20 to bring people in, give up profit to do that. Is that the
21 kind -- and the suggestion is that Google is doing that. Is
22 that conduct consistent with what a monopolous would do?

23 A Generally, no. That's conduct consistent with
24 competition. So that's sort of aggressive price cutting on
25 certain products to attract business is what you need to do

1 when you compete.

2 Q Is that consistent with significant and sustained
3 market power, that rotisserie chicken conduct?

4 MR. TEITELBAUM: Objection. Leading.

5 THE COURT: Sustained.

6 BY MR. ISAACSON:

7 Q Well, there's a concept of significant and sustained
8 market power, and there's a concept of rotisserie chicken.
9 Would you tell me your view on how those two -- what those
10 two have to do with one another?

11 A Significant and sustained market power generally would
12 mean that you can maintain high prices, high profits, and
13 not -- so it's inconsistent with behavior where you need to
14 set very low prices in order to attract bids.

15 Q All right. The Court asked you about microwaves and
16 stoves. Would you compare microwaves and stoves as
17 substitutes to the substitutes that you've discussed in this
18 case?

19 A No. I think microwaves and stoves are more distant. I
20 mean, it was a better example because at least there's the
21 ability to use them together. But, you know, in this case,
22 we see active ongoing evaluation of these options against
23 each other, and we see they can provide exactly the same ad
24 in exactly the same way. So it's more like two stoves. But
25 at least microwaves and stoves moved in the right direction

1 of being able to do some of the same things.

2 Q All right. There was a discussion of small publishers
3 and whether they needed AdX and the advertisers to come
4 through AdX. There was a discussion where advertisers might
5 be looking for a particular publisher. Would you discuss
6 how you think the matching works. Are advertisers looking
7 for publishers?

8 A I mean, I think of the matching that matters being
9 advertisers looking for the best places to find impressions.
10 But the way that process would work is publishers have
11 impressions available for sale. They put them out to -- you
12 know, they make that known to a variety of exchanges. They
13 make that known to a variety of buy-side tools. So as long
14 as an advertiser is working across multiple buy-side tools,
15 it's likely to see those impressions in multiple ways.

16 Q And what are the impressions?

17 A The impressions are individual users who are auto paid
18 somewhere that the advertiser has some interest in reaching
19 to sell its products.

20 Q All right. In terms of small local newspapers, for a
21 small publisher, what do they have to pay GAM in terms of
22 fees for DFP?

23 A Nothing.

24 Q And there's been the example of the *Staunton News*
25 *Leader*, which is part of the Gannett world. How many small

1 independent publishers are left?

2 A There was some discussion in my report. Clearly, many
3 fewer than there were.

4 Q All right. And just on this issue of tying, I just
5 want to get something clear. There was a demonstrative we
6 used with Dr. Abrantes-Metz. And could you explain what
7 your view is of why this is a -- of whether this is a tying
8 case or not based on this demonstrative?

9 A I mean, I don't -- this is not what I, as an economist,
10 would define as a tie. The tie would be that the behavior
11 alleged to cause harm was the joint sale of AdX and DFP as
12 one. So they're tied together, right. But that's not --
13 that conduct -- actually, in this case, that's integration,
14 which I described the benefits of.

15 The conduct I understand to be at issue is not the tie.
16 It's the decision whether or not to deal with rival ad
17 servers by giving them real-time bids.

18 Q So if you just go to the next -- if you take away the
19 box and separate the products --

20 A Nothing changes for the allegations here. The products
21 wouldn't be sold together, which may be would have some
22 disadvantages from an integration point of view. But there
23 still would be this question of are you offering real-time
24 bids to rival ad servers?

25 Q So if you look at the white binder, the plaintiffs'

1 binder, the first document in that binder was PTX 22. And
2 this is a May 2008 document, and you were asked about
3 language on this email at the top. And you said you thought
4 this wasn't relevant to you. Would you explain why you were
5 saying that?

6 A Because as I read this sentence, it's a firm operating
7 its products and deciding which competitors to let in and --
8 or which competitors -- which rivals to work with and which
9 rivals not to work with. That's part of what I was
10 describing as the freedom to deal or not deal with
11 competitors. That's an important part of the competitive
12 process.

13 In general, as an economist -- and this document
14 confirms -- when I see them saying they're not fully going
15 to work with their competitors or their -- you know,
16 whatever actions they're taking towards their competitors,
17 that's part of the competition.

18 Q All right. And if you just turn to the next tab, PTX
19 56 -- and you were shown page 1783 of this in talking about
20 whether Admeld was a competitive there. If you're looking
21 at the title, what is the competitive threat? Do you see
22 the reference to AdSense?

23 A Yeah. I mean, what's listed in the title is yield
24 managers.

25 Q And the competitive threat is to?

1 A To the current AdSense business and future supply-side
2 prospects.

3 Q All right. If we could, look at Plaintiffs'
4 Demonstrative -- I think we know this, but is AdSense in the
5 plaintiffs' markets?

6 A No.

7 Q All right. There's Plaintiffs' Demonstrative AG. So
8 in the lower right-hand corner was a chart that you used,
9 DTX 1828. And by 2022, how much of that ad spending was
10 going to Google?

11 A Of the ad spend -- I think we showed that earlier --
12 about the total ad spending in the display, 10 percent was
13 going to Google.

14 Q Right. And 5 percent of that was due to YouTube as
15 opposed to any ad tech; is that right?

16 A Well, YouTube has ad tech. But 5 percent of it was
17 YouTube, and 5 percent of it would have sort of third-party
18 ad tech.

19 Q Maybe I should put it this way: The ad tech for
20 YouTube is also not part of the plaintiffs' markets; is it?

21 A That is correct.

22 Q When you compare this to the other examples, how does
23 Google's share of this display ad spending compare to these
24 other historic examples?

25 A Obviously, I don't want to testify to exact numbers,

1 but these are pretty well-known examples where we have firms
2 operating effectively as monopolous. In each case, output
3 was growing. Yeah, you're definitely a very different
4 picture of the share of the firm in question.

5 Q All right. If you just move now back to the white
6 binder, it's PTX 580. I have it as a handwritten tab. I
7 don't know what you have. It's towards the back of the
8 binder. This was a Facebook document. If we could, look at
9 page 815 at the bottom. And this is a Facebook document
10 from 2018, "What is the opportunity cost of AN?"

11 You know Facebook AN is, right?

12 A The Audience Network, yeah.

13 Q All right. It says, "AN is a different business model
14 to Fb/IG because we share revenue with the publisher.
15 Whilst we take 100% of revenue on Fb/IG, we operate at a 31%
16 margin on AN. This means there is an opportunity cost to Fb
17 Inc in serving ads on AN and sharing 69% revenue with a
18 publisher, when we could have taken 100% if the same budget
19 was delivered on Fb/IG."

20 Would you just compare the business models that we're
21 talking about there and compare it also to -- well, compare
22 these business models.

23 A The two Facebook business models, so the 100 percent
24 would be the owned-and-operated where Facebook is the
25 publisher and the tech. So we know that in every case

1 between the publisher and the tech, they take 100 percent of
2 the revenue. So Facebook gets it all there.

3 The other model, AN, is Facebook as a buy-side tool.
4 So Facebook buying -- Facebook operating like Google Ads.
5 Facebook buying third-party inventory, and there they're
6 saying they take a 31 percent margin on that business.

7 Q And FAN is what moved out of the open-web channel into
8 the mobile web channel?

9 A Correct. So FAN is similar --

10 Q I'm sorry -- to the app channel, not web.

11 A Similar to Google in some sense, Facebook had
12 advertisers that worked with its owned-and-operated sites.
13 It used those relationships to start selling them other
14 stuff. First FAN sold web and app, and then in 2020 or so,
15 it was focused on app.

16 Q Right. So what's your opinion about saying that
17 Facebook, by having a model where it's taking 100 percent
18 rather than sharing with the publishers, is not competing
19 with Google -- for example, the Google ad tech in this case?

20 MR. TEITELBAUM: Objection. Leading.

21 THE COURT: Sustained.

22 BY MR. ISAACSON:

23 Q Would you compare the Facebook model where they are
24 keeping 100 percent to Google's ad tech?

25 A Again, Facebook's operating as the publisher there too.

1 So in each of these cases, the ad tech is competing.

2 Facebook Audience Network is the competing source of ad
3 tech. Facebook owned and operated as a competing source of
4 ad tech. The different margins here are just reflecting in
5 one of those. Facebook is also the publisher.

6 Q How does that 31 percent margin compare to what you
7 found for Google's take rate across its ad tech stack?

8 A I mean, this is very similar to Google's take rate
9 across the entire ad tech stack. But as I understand it,
10 this is Facebook taking it just as a buy-side tool. So this
11 would be higher than Google's buy-side take rates.

12 Q And this would be the -- when you say to Google's
13 buy-side tool, what are you referring to?

14 A As I said, I think Facebook Audience Network is most
15 comparable to Google Ads.

16 Q And what's that take rate?

17 A 14 percent dropping below to 12 or 13 today.

18 Q All right. Would you look finally at PTX 1650, which I
19 think is next in the binder.

20 This is The Trade Desk Palooza 17 about header bidding.

21 And if we look at 3045, what is it saying about header
22 bidding?

23 A It levels the playing field. I saw a few things in
24 this document about how header bidding creates competition.

25 Q And then on 047, what is The Trade Desk describing

1 about header bidding adoption?

2 A That the presence of these wrappers that firms are
3 providing is accelerating the adoption.

4 Q And on 049, what is Trade Desk explaining are the pros
5 and cons of header bidding before publishers?

6 A The pros are ones that we've discussed. Header bidding
7 can bring in these additional competing demand sources, and
8 so it increases prices and yields and revenues.

9 The cons have also been discussed in terms of some
10 latency and some complexity over -- you know, over the
11 operation. I mean, I would say depending on how you manage
12 it. But it's pointing to the technology issues.

13 Q And finally, at 3058, at Palooza 17, what is Trade Desk
14 saying header bidding is going to mean for Trade Desk in
15 terms of market share over the long term?

16 A It says in the long term, The Trade Desk will gain
17 market share, and then it says it will emerge as a stronger
18 company.

19 MR. ISAACSON: Thank you, Dr. Israel.

20 THE COURT: Any recross?

21 MR. TEITELBAUM: No recross.

22 THE COURT: Okay. Thank you.

23 I'm assuming there's a possibility of recall.

24 MR. ISAACSON: Possibly.

25 THE COURT: All right. So you can remain in

1 court. You've been in court most of the couple of weeks.
2 But don't discuss your testimony with any witness who has
3 not yet testified.

4 All right. We're going to go to depositions now;
5 is that correct?

6 MS. DUNN: Yes, Your Honor.

7 THE COURT: All right.

8 MS. DUNN: Your Honor, the remaining depositions
9 are all via read-in. Hopefully, our reader-in is available.

10 THE COURT: Yes.

11 MS. DUNN: Your Honor, Google calls James
12 Glogovsky of the *New York Times* via read-in.

13 THE COURT: All right.

14 MS. DUNN: Thank you, Your Honor.

15 (The deposition of James Glogovsky is read as follows:)

16 Q Okay. So you came to the New York times in 2017? What
17 was your role when you came to the Times?

18 A I started at the *New York Times* as director of yield.

19 Q What did that role entail?

20 A Primary responsibilities was the pricing and inventory
21 for our direct business.

22 Q How has your role changed over time just briefly?

23 A My role has evolved and changed periodically. I went
24 from director of yield to now vice president of revenue
25 operations and analytics, which has a broader remit.

1 Q What is that broader remit? What's your -- what do you
2 do now?

3 A I still oversee digital direct pricing and inventory
4 with the additions of our print business, also custom
5 pricing, sales planning or media planning, ad operations and
6 solutions and programmatic.

7 Q I think you said this, but you do that across digital
8 and print?

9 A That is correct.

10 Q Does the *New York Times* make money by selling ad space?

11 A Yes.

12 Q Does the *New York Times* print ads?

13 A Yes.

14 Q Does the *New York Times* also sell digital ads?

15 A Yes.

16 Q Where did the digital ads run?

17 A Digital ads run across our many surfaces, both web and
18 app face.

19 Q When you say web, is that NewYorkTimes.com, or is there
20 some other aspect of the web?

21 A That is NewYorkTimes.com along with our games, cooking,
22 athletic.

23 Q Are there individual apps for games, cooking, and the
24 athletic?

25 A Yes.

1 Q And is there also a *New York Times* app?

2 A Yes.

3 Q Digital ads -- do digital ads run on all of those
4 different apps?

5 A Yes.

6 Q Does the *New York Times* run apps during its podcasts?

7 A Yes.

8 Q Is that considered part of digital?

9 A We classify audio as part of digital.

10 Q Does the *New York Times* run email ads?

11 A Yes.

12 Q Are those also classified as part of digital?

13 A Yes.

14 Q Any other things that fall into the digital category
15 that you can think of?

16 A We also have a video business within the web ad apps,
17 and that would be considered digital as well. And we also
18 have a custom or a branded content studio which produces
19 mostly digital content, which would also be classified as
20 digital.

21 MS. DUNN: Your Honor, move to admit DTX 1824.

22 MS. WOOD: No objection.

23 MS. DUNN: I have a note that it's redacted.

24 THE COURT: It's in.

25 MS. DUNN: Thank you, Your Honor.

1 Q Mr. Glogovsky, you should have a document in front of
2 you that's titled Ad Leadership Update, March 4. Do you see
3 that?

4 A Yes.

5 Q Do you recognize this document?

6 A Yes.

7 Q What is it?

8 A It is an updated -- update for our ad leadership team,
9 dated March 4, which we regularly produce in general
10 practice.

11 Q So these -- are these documents created in the normal
12 course of the *New York Times*' business?

13 A In the normal course, yes.

14 Q Do you participate in -- well, I guess I should ask:
15 Is this a presentation that's delivered?

16 A It can be a presentation. It also does not always lead
17 to a presentation.

18 Q Do you participate in drafting these kind of decks?

19 A Generally, yes.

20 Q Let's take a look at page 3, which is Bates stamped
21 with the end Bates 006. Do you see that?

22 A Yes. Yes.

23 Q What is this chart showing?

24 A This chart is an update of our revenue position as of
25 the time of this deck was created broken out at this time by

1 the product categorizations that we have within the ad
2 department.

3 Q At the top, there is three blue lines that say, total
4 advertising, print, and digital. Do you see that?

5 A I do.

6 Q Okay. Let's focus on digital. Based on this chart --
7 well, let's say this. Under the digital line item, there
8 are a bunch of different rows starting with display. Do you
9 see that?

10 A I do.

11 Q Okay. The first line says display total, and then
12 under that, there's a line that says direct banners and PG.
13 Do you see where I am on the chart?

14 A I do.

15 Q What are direct banners and PG? What is that category?

16 A Direct banners and PG are the display ads on -- running
17 on the *New York Times* properties that are directly sold to
18 our advertisers through a typical insertion order and have
19 not been procured in a non-guaranteed manner.

20 Q What's the difference? Is there a difference between
21 direct banner and PG?

22 A We have classified direct banner and PG under the same
23 because that has a direct relationship with either the
24 advertiser and/or agency, and we have grouped them together
25 for that purpose.

1 Q What does PG stand for?

2 A PG stands for programmatic guarantee.

3 Q You said that direct banners and PG run across the *New*
4 *York Times*' properties. What properties are you referring
5 to?

6 A The digital banners that are directly sold typically
7 run on the NewYorkTimes.com and their associated apps and
8 web views. And they also include oftentimes our other
9 properties, such as cooking or games, depending on the
10 available ad experience at the time of this document and
11 sends them.

12 Q What about the *New York Times* app, like the news app?
13 Does that include direct banner and PG?

14 A The *New York Times* app does include direct banners and
15 PG.

16 Q The second row in this document right under where we
17 were before, it says, programmatic-open PMP. What is that
18 category describing?

19 A That category is describing the open auction and PMP
20 revenue that we earn from a number of our ad tech providers,
21 SSPs, and this is a total of that revenue during this period
22 of time.

23 Q What does PMP stand for?

24 A PMP or private marketplace deal is another way of
25 describing it. It is where a publisher, such as *New York*

1 Times, would work with the SSP and/or DSP, an advertiser, to
2 set up a direct link in the SSP and DSP to run on the New
3 York Times.

4 Q Is that different from an open auction?

5 A It is different from an open auction. As it is open
6 auction, we do not have direct relationships with that
7 specific advertiser or potentially the DSP itself.

8 Q Well, I'm looking at the -- I'm looking at the chart.
9 We're on the line that says programmatic open PMP, and I
10 think there is at least an estimated revenue from 2019 on
11 here. Am I reading that correctly?

12 A The estimate revenue for 2019 was for Q1 of 2019, and
13 the number here was \$9.8 million.

14 Q On this chart, do you agree with me that that's less
15 than half of the Q1 2019 revenue listed for direct banner
16 and PG display?

17 A I do agree with you that it's less than half.

18 Q Is that common?

19 A Generally speaking, our direct business creates the
20 larger share of our direct business.

21 Q I think you said our direct business creates the larger
22 share of our direct business. Do you mean generally
23 speaking, our direct business creates a larger share of our
24 display business?

25 A Yes. Thank you for the clarification.

1 Q Are open PMP display ads available on the web and on
2 the app?

3 A As of today, yes, we do have open auction and PMP on
4 web and our apps.

5 Q Does the *New York Times* decide how much of its display
6 ad space it wants to sell through PMP versus open auction?

7 A We have ambitions for PMPs to grow because it does have
8 a higher level of certainty that it is coming from an
9 advertiser or agency that is known, and it typically trades
10 at a higher CPM.

11 Q When you say it typically trades at a higher CPM, do
12 you mean a higher CPM than open auction?

13 A Yes. PMPs typically trade at higher CPM than open
14 auction.

15 Q Does most of the *New York Times* revenue on display ads
16 come from direct sales?

17 A The majority of revenue comes from direct sales.

18 Q Are the video ads that fall into the programmatic
19 category served on the web?

20 A Yes.

21 Q Are they also served in the *New York Times* apps?

22 A Yes.

23 Q So the video line below that, that actually says video.
24 Are those ads served on both the web and in the app?

25 A Yes.

1 Q Does the *New York Times* sell native ads or native ad
2 space?

3 A There have been a number of experiments and
4 explorations into native ads. We consider our T brand
5 content since it is an ad itself and does look and feel like
6 the *New York Times* domain would be one consideration as a
7 native ad. We do also sell our flex frames that are meant
8 to feel and look like the *New York Times* content. So yes,
9 we do.

10 Q Are flex frames display ads?

11 A Flex frames would be considered display ads.

12 Q So would native ads fall into the display category?

13 A They would fall into the display category is how we
14 have personally classified them.

15 Q Are native ads sold programmatically?

16 A We have experimented with native ads, and on select
17 surfaces and times, we have turned on native ads
18 programmatically.

19 MS. DUNN: Your Honor, move to admit DTX 1599.

20 MS. WOOD: No objection.

21 THE COURT: All right. It's in.

22 Q If you reload the document, it should be there, and
23 it's just marked Exhibit 2.

24 Do you know what this document is?

25 A It appears to be our ads.txt file.

1 Q Do you have any reason to question whether this is an
2 accurate version of the ads.txt file?

3 A I do not have any reason to believe that it's not an
4 accurate representation based on the time.

5 Q Is the *New York Times* ads.txt file created and
6 maintained in the normal course of business?

7 A It is our general practice to maintain it over the
8 course of regular business.

9 Q Are the entities that are listed on this page a list of
10 digital sellers that are permitted to sell *New York Times* ad
11 inventory?

12 A Yes, the names on this list are the ad technology that
13 are permitted to sell on our site.

14 Q Does Amazon Publisher Services place ads on *New York*
15 *Times* properties?

16 A Amazon ad systems or APS does place ads.

17 Q What kind of inventory does Amazon put on the *New York*
18 *Times* properties?

19 A It is predominantly display media.

20 Q And does Xandr sell the *New York Times* digital
21 inventory?

22 A Xandr is one of the SSPs that has the capability of
23 selling *New York Times* inventory.

24 Q Are all of the entities listed on the ads.txt page
25 entities that the *New York Times* allows to sell its digital

1 inventory?

2 A The ad technology companies within this ads.txt file do
3 have the authorization of selling the *New York Times* supply,
4 yes.

5 Q Do they do that programmatically?

6 A These files -- this file or these partners would be
7 selling programmatically.

8 Q Does Xandr place ads on the *New York Times* properties
9 via header bidding?

10 A Yes.

11 Q What kind of inventory does Xandr place on the *New York*
12 *Times* properties?

13 A Display ads.

14 Q The entity below that says IndexExchange.com. What is
15 that referring to?

16 A Index Exchange or IX is another ad -- ad tech provider
17 for SSPs or is an SSP.

18 Q Does Index Exchange place ads, or does Index Exchange
19 sell the *New York Times* ad inventory?

20 A Yes.

21 Q Does it place ads on *New York Times* properties via
22 header bidding?

23 A Yes.

24 Q What kind of inventory does it place on *New York Times*
25 properties?

1 A Primarily, display ads and a very small amount of video
2 ads would be potentially possible as well.

3 Q The line below that says OpenX.com. Several lines
4 below that, what is that referring to?

5 A OpenX is another SSP technology partner that we use.
6 The subsequent line items for each of these are the separate
7 integrations that we have for header bidding and open
8 bidding.

9 Q Does OpenX then place ads on the *New York Times*
10 properties via header bidding?

11 A Yes, that is one of the paths.

12 Q And does it also place ads on the *New York Times*
13 property using open auction -- sorry, open bidding?

14 A Thank you for clarifying. Yes, it does place ads
15 through both header bidding and open bidding.

16 Q What kind of ad inventory does it place on *New York*
17 *Times* properties?

18 A Predominantly, display media with the possibility of a
19 small amount of video.

20 Q The line below OpenX says RubiconProject.com. Do you
21 see that?

22 A Yes.

23 Q What is that referring to?

24 A Rubicon is another ad technology SSP that we partner
25 with. I believe it's now called Magnite after a rebrand.

1 Q Does Magnite place ads on the *New York Times*
2 properties?

3 A Rubicon does place ads on the *New York Times*
4 properties.

5 Q Does Rubicon or Magnite place ads on the *New York Times*
6 properties via header bidding?

7 A Yes.

8 Q And what kind of ad inventory does it place on the *New*
9 *York Times* properties?

10 A Magnet predominantly fills or sells our inventory as
11 display banners, with a small minority share potentially
12 going to video.

13 Q Below that is TripleLift.com. Do you see that? What
14 is TripleLift?

15 A I do. TripleLift is the ad technology SSP that we work
16 with -- that we work with one of.

17 Q Below TripleLift is PubMatic.com. What is that
18 referring to?

19 A PubMatic is an ad technology SSP that we partner with
20 across a number of integrations.

21 Q Does the *New York Times* allow PubMatic to sell its
22 inventory?

23 A Yes.

24 Q Does it do that via header bidding?

25 A Yes.

1 Q What kinds of ads does it place?

2 A Predominantly display ads with the potential of a small
3 minority share of video ads.

4 Q Below that is Media.net. What's that referring to?

5 A Media.net is an ad technology SSP that we partner with.

6 Q Does Media.net sell *New York Times* ad inventory?

7 A Yes.

8 Q Does it do so via header bidding?

9 A Yes.

10 Q What kind of ads does it place on the *New York Times*
11 properties?

12 A Display.

13 Q Does Yahoo.com sell *New York Times* ad inventory?

14 A Yes.

15 Q Does it do so via header bidding?

16 A It would, either header bidding or open bidding. We
17 have experimented with both.

18 Q Why does the *New York Times* have more than one platform
19 that sells its inventory?

20 A The *New York Times* has experimented with a number of
21 different platforms. And based on those experiments and the
22 results of those experiments, we have concluded that a
23 number -- or more than one platform helps drive incremental
24 revenue through competition.

25 Q When you say it drives revenue through competition,

1 what kind of competition are you referring to?

2 A The competition that I'm referring to is exclusively
3 the bid competition within the ad call and the number of
4 competing bids, whether that be our direct business within
5 the ad server or programmatic bids that have been solicited.

6 Q There are several providers listed on the ads.txt file
7 that we just talked about. Do you know who I'm referring
8 to?

9 A Yes.

10 Q Do the providers that are on that list compete against
11 each other to sell *New York Times* ad inventory?

12 A It is our intention to have these providers in specific
13 surfaces compete with our direct business to elicit higher
14 CPMs and drive incremental revenue.

15 MS. DUNN: Your Honor, move to admit DTX 997.

16 MS. WOOD: No objection.

17 THE COURT: All right. Yes, it's in.

18 MS. DUNN: 997.

19 Q Do you recognize this document?

20 A I do.

21 Q What is it?

22 A It is a recap of a test completed and accompanied with
23 a recommendation around whether or not we should continue
24 using integration for a header bidder.

25 Q Is this something that was created in the normal course

1 of business at the *New York Times*?

2 A Yes.

3 Q Do you know why Index Exchange was tested?

4 A Index Exchange was tested as we were working through to
5 better understand how to improve our site performance, and
6 header bidding typically adds tax to the site performance
7 and may slow down the page load for the end reader or user.

8 Q When you say site performance, what site are you
9 referring to?

10 A I am specifically speaking to the NewYorkTimes.com.

11 Q Let's turn to the next page, which ends in 000109. Do
12 you see that?

13 A I do.

14 Q This section at the top is entitled, "Recommendation
15 and Test Setup," and under recommendation, it says the
16 following: "It's our recommendation to remove Index
17 Exchange wrapper integration and migrate all index demand
18 open plus PMPs to Google's exchange bidding, EBDA. The test
19 confirmed our hypothesis that Index Exchange's wrapper
20 integration isn't providing incremental value. And instead,
21 it's adding additional tech and operational burden to the
22 organization. Additionally, based on evidence, we do not
23 believe there will be a revenue impact to the programmatic
24 business."

25 What is wrapper integration?

1 A Wrapper integration would be synonymous with
2 header-bidder partner. We would use them interchangeably.

3 Q And what does it mean to migrate all Index demand to
4 Google's exchange bidding?

5 A Before this test, Index was running within the index
6 wrapper or header bidder. We would shift that partner from
7 that header bidder solution into the -- at the time Google
8 exchange bidding, which is now more commonly known as open
9 bidding.

10 Q In the second sentence of this paragraph, it says that,
11 "The test confirmed our hypothesis that Index Exchange's
12 wrapper integration isn't providing incremental value, and
13 instead, it's adding additional tech and operational burden
14 to the organization."

15 What additional tech burden was being added by Index
16 Exchange's wrapper?

17 A The tech burden that we are outlining here is the
18 technology impact around the site performance, which could
19 also include the speed in which the page is loading for the
20 end user or reader.

21 Q And what's the operational burden you're talking about?

22 A Operationally, that is the personnel and the time of
23 those people responsible for managing that specific
24 integration, and also the partnership in which we had with
25 Index Exchange.

1 Q You said that the tech -- the tech burden you were
2 referring to could include issues with the speed in which
3 the page is loading for the end user or reader.

4 Why does that matter to the *New York Times*?

5 A There are a number of factors why this is important for
6 us. It is both ad related and also the user or reader
7 experience. It is our priority to provide an experience for
8 our readers that loads quickly and has a proper or fast
9 experience for them to consume the content.

10 On the ad side, any slowdown in the ad, in the page
11 load, and the process around loading the content and the ads
12 has incremental or negative impacts -- sorry, negative
13 impacts to the number of ads that we serve, and potentially
14 the viewability of those ads that we are placing on the
15 surface.

16 Q What does it mean that Index Exchange's wrapper is not
17 providing incremental value?

18 A Over the normal course of testing at the *New York*
19 *Times*, we try to use the appropriate methodologies that
20 allows us to test both the control and a variant.

21 In this experience, the results beared out that there
22 was no excessive -- excess revenue coming from our
23 incremental revenue coming from -- oh, sorry. There was no
24 excess revenue coming from or incremental revenue coming
25 from open auction by eliminating Index's wrap, and other

1 SSPs were able to make up for that revenue loss.

2 Q Why was the recommendation to migrate all of Index
3 Exchange's demand to Google's exchange bidding?

4 A We made the recommendation to move the partners out of
5 Index Exchange or Index Exchange -- sorry, out of Index
6 Exchange header bidding to open bidding, or EB, because EB
7 typically has a lower impact on the site performance and is
8 also managed within Google Ad Manager, which would limit the
9 impact of operation burden.

10 Q Today for display the *New York Times* uses Google's DFP
11 as its publisher ad server; is that right?

12 A Yes.

13 Q Before using DFP as its publisher ad server, what did
14 the *New York Times* use as its publisher ad server?

15 A The *New York Times* used a proprietary ad server to fill
16 our ads across our properties before Google Ad Manager or
17 DFP.

18 Q And who built and operated that proprietary ad server?

19 A The *New York Times*' resources and personnel.

20 Q When approximately did the *New York Times* switch from
21 using the *New York Times*' proprietary ad server to using
22 DFP?

23 A I cannot recall the specific date. It was prior to my
24 employment at the *New York Times*. I believe it was around
25 2015.

1 Q And why didn't the *New York Times* switch from using the
2 *New York Times'* proprietary publisher ad server to using
3 Google's DFP as its publisher ad server for display?

4 A There were a number of factors into which we made the
5 decision to sunset the use of our own proprietary ad server
6 and migrate to DFP, or now Google Ad Manager.

7 Amongst them was aligning ourselves with the industry
8 standard that other publishers were using, the capability of
9 utilizing Google's programmatic demand, most specifically
10 dynamic allocation, which is a feature of Google's
11 programmatic tool. Also, it helped with improving other
12 personnel operations and also reducing the impact of billing
13 discrepancies with our direct relationships with advertisers
14 and agencies.

15 Q Let me turn back to the *New York Times'* proprietary
16 publisher ad server. What disadvantages, if any, are there
17 to the *New York Times* using a publisher ad server for
18 display that it has built and operated itself?

19 A Just to clarify, disadvantages?

20 Q Right.

21 A Maintaining ad technology that is home grown, built
22 internally, whether that be an ad server, has several
23 disadvantages. One, the operational support and
24 infrastructure in capital resources required to maintain
25 that and to evolve with the industry exchanges would require

1 us to invest a significant portion.

2 And then also, just staying up to date with the
3 resolving landscape of the ad formats and being able to
4 adapt to our client's needs readily and availably or
5 quickly.

6 Q Do you know if any publishers other than the *New York*
7 *Times* use their own proprietary ad server for display today?

8 A I do not know of any off the top of my head.

9 Q Sure. Just in your opinion, would it be a good idea
10 for the *New York Times* to start using a proprietary
11 publisher ad server for display today?

12 A In my personal capacity as an individual, I would not
13 make that recommendation.

14 Q Setting aside this document, what would your best
15 estimate be for percentage of *New York Times* programmatic
16 display revenue that comes from AdX and opening bidding
17 combined?

18 A My best guess without the data in front of me, and I
19 could speculate that it would be between 55 and 70 percent.

20 Q As of today, what would be your best -- what would your
21 best estimate be for the percentage of the *New York Times*
22 programmatic display revenue that comes from AdX?

23 A Based on my best guess for web and apps, not inclusive
24 of audio or newsletter, and explicitly AdX, I would suspect
25 the share of revenue for open auction would be between 55

1 and 70 percent.

2 Q What is your best estimate as of today for what the
3 share would be for the second-largest exchange in terms of
4 the share of the *New York Times* programmatic display revenue
5 that would come from that exchange?

6 A Once again, only web and app and excluding newsletter
7 and audio for the second-largest programmatic partner, the
8 best guess I would have would range and vary depending on
9 the seasonality and time of year and platform.

10 Q Okay. How do Google's open auction take rates for
11 display compared to the open auction take rates for the
12 other exchanges that you're aware of that the *New York Times*
13 used?

14 MS. DUNN: This portion is sealed. So we'll wait
15 a second.

16 THE COURT: Okay.

17 Q Are the *New York Times*' take rates for AppNexus lower
18 than, equal to, or higher than AdX take rates for open
19 auction for the *New York Times*?

20 MS. DUNN: This part is sealed.

21 THE COURT: All right.

22 Q Do you know specifically what AppNexus' take rates for
23 the *New York Times* are for open auction for display?

24 THE COURT: Okay.

25 Q Do you think it makes sense to give publishers the

1 option to set different price floors for different exchanges
2 for display?

3 A I believe it makes sense to provide publishers the
4 capability of adjusting pricing floors within their systems,
5 yes.

6 Q Why do you believe it makes sense to give publishers
7 the option to set different price floors for different
8 exchanges for display?

9 A One of the most obvious reasons for us is price -- is
10 one of the -- excuse me. Price is one of the most important
11 determinants of how much fill and the number of advertisers
12 coming into the supply. A higher price floor will reduce
13 the number of advertisers or impression being filled by
14 programmatic partners within a space. We have used this on
15 occasion to protect for high -- better ad quality, and this
16 capability allows us to do that.

17 Q Do you personally believe -- if the decision were up to
18 you, would you give publishers the option to set different
19 price floors for different exchanges for display, or would
20 you not give them an option?

21 A If it was up to me personally, in my own personal
22 capacity, I would give publishers the capability of making
23 price floors for each of their programmatic partners or
24 providers.

25 Q Overall, is header bidding good or bad for the New York

1 *Times?*

2 A Header bidding has been a positive introduction to the
3 programmatic revenue for the *New York Times*.

4 Q Did the *New York Times* use header bidder wrappers even
5 though they have the potential to reduce page load speeds
6 and impact reader experience?

7 A Page load speed is just one of the considerations when
8 we are making a decision within our framework, the
9 incrementality of revenue being another as well and also
10 making sure that the *New York Times* has broad-based appeal
11 to our advertisers in the marketplace. And so we have made
12 the determination it is valuable to have header bidding as
13 well.

14 Q Why does the *New York Times* sell both display ads and
15 other types of ads, like app or like audio?

16 A We consider display ads as display ads that are
17 eligible to run on web environments and app. We wouldn't
18 consider app being a separate product. And we do sell more
19 than just display ads. We sell audio as audio as an
20 endeavor that we are investing in to grow our reach and
21 broadening the population that is aware of the *New York*
22 *Times* and likely and eventually to subscribe to the *New York*
23 *Times*.

24 Q How easy or difficult would it be for the *New York*
25 *Times* to shift a significant number of advertising

1 impressions from web to app?

2 A We as an advertising department for direct sold
3 advertising continue to sell across platform, and allow our
4 ads to deliver across both web, mobile web, and desktop web
5 and our apps equally as where there is supply. So that
6 natural shift would happen as our readers shift.

7 THE COURT: All right. Do you have more?

8 MS. DUNN: Your Honor, I think what will happen is
9 we can start another one. I doubt we have one that we'll
10 finish in the time allotted but happy to start.

11 THE COURT: Yes.

12 MS. DUNN: Your Honor, Google calls via read-in
13 Omri Farber of Meta.

14 THE COURT: Go ahead.

15 MS. DUNN: Thank you, Your Honor.

16 Q Can you for the record please state your full name?

17 A Omri Farber.

18 Q Mr. Farber, where do you live?

19 A London, U.K.

20 Q Mr. Farber, what's your current position at Meta?

21 A I'm a product manager. I'm the lead product manager on
22 Audience Network.

23 Q Great.

24 And what are your responsibilities as you lead -- as the
25 lead project manager for Audience Network?

1 A I am accountable for the day-to-day performance
2 reporting end-to-end business of Audience Network from a
3 product and engineering perspective.

4 Q Great. Thank you.

5 Mr. Farber, do you understand that you're here today to
6 provide testimony as a corporate representative for Meta
7 Platforms, Inc.?

8 A Yes.

9 Q Great.

10 And you understand that you're a corporate
11 representative here, testifying as a corporate
12 representative here today for Meta Platforms, Inc., related
13 to certain topics concerning the Meta Audience Network?

14 A I do, yeah.

15 Q Mr. Farber, what is the Meta Audience Network?

16 A Meta Audience Network is a network that connects
17 publishers, i.e., app developers in our case with
18 advertisers and users enabling publishers to monetize their
19 digital entities, advertisers to reach users across
20 different -- enabling publishers to monetize on their
21 digital entities, advertisers to reach users or Meta users
22 across different publications, online publications, and
23 enabling users to receive relevant and engaging ads in those
24 publications.

25

1 Q When did Meta launch the Meta Audience Network?

2 A If I recall, 2014.

3 Q And why did Meta launch the Meta Audience Network?

4 A There were a number of reasons. Fundamentally, it was
5 to keep on enabling and providing value to advertisers as we
6 have before, but by enabling new and additional supply
7 beyond Facebook's owned-and-operated apps. So prior to
8 Audience Network, advertisers would come to Meta and pay to
9 have their ads displayed. Those ads would be displayed on
10 Meta's owned-and-operated surfaces only, i.e., Facebook,
11 Instagram, etc. Audio Network came to --

12 Those ads would be displayed on Meta's
13 owned-and-operated surfaces or apps, which would be Facebook
14 or Instagram, for example.

15 Audience Network added additional supply to those
16 surfaces essentially by onboarding or adding additional
17 apps, additional publishers where advertisers ads could be
18 served.

19 What this did fundamentally is it provided better value
20 for advertisers because they were no longer supply
21 constrained, or at least they were less supply constrained.
22 They could reach more people across different times, across
23 different places without the limitation of only family of X.
24 At the same time, it also created additional value.

25 MS. DUNN: Meta home services.

1 Q Approximately how many publisher customers does the
2 Meta Audience Network serve?

3 A Between 14,000 and 16,000.

4 Q So how many advertisers does the Meta Audience Network
5 serve?

6 A So Meta is open to -- Meta Audience Network is open to
7 all Meta advertisers, which are in the millions. I don't
8 know the exact figure off the top of my head. Advertisers
9 then have a choice of whether or not they want to opt in or
10 serve their ads through Audience Network, which is
11 completely up to the advertiser. I believe today about
12 50 percent of campaigns or advertisers opt in to serve their
13 ads. So a few million. I don't have the exact number.

14 Q Do advertisers that use the Audience Network also
15 advertise on Facebook?

16 A Yes.

17 Q And do advertisers that use the Audience Network also
18 advertise on Instagram?

19 A Yes.

20 Q Do the advertisers that use the Audience Network
21 include small businesses?

22 A Yes.

23 Q What's the value proposition that Meta Audience Network
24 offers advertisers?

25 A Meta Audience Network, the same as the rest of Meta,

1 allows advertisers, small and big, to fulfill their
2 marketing objectives. And therefore, we have positive
3 return on their investment or return on their ad spend.
4 Advertisers, as I mentioned, would have different marketing
5 objectives. We tend to look at this as a funnel from the
6 top, which would be reach -- just having as many people or
7 as many specific people see your ad as possible all the way
8 through considering making a purchase for a conversion event
9 in the future, through different types of conversions, which
10 could be anything from purchase, app install, subscription,
11 and retention. Meta Audience Network, as the rest of Meta,
12 serves advertisers across all of those objectives.

13 Q What does Meta believe makes its Audience Network
14 attractive to advertiser customers?

15 A At the fundamental level, it's what I just said, which
16 is it allows them, like other surfaces that aren't Audience
17 Network, to fulfill their objectives.

18 On a more granular level, specifically to Audience
19 Network, it increases the reach as it allows them to serve
20 ads and fulfill marketing objectives across more
21 opportunities, across more impressions through serving those
22 ads with more apps. And therefore, statistically, more
23 advertisers can essentially fulfill their objectives.

24 Another component here is the cost of media. The cost
25 of impressions tend to be lower for, the most part, on

1 Audience Network versus the rest of Meta, all Meta's own
2 surfaces, which helps all publishers but -- sorry, all
3 advertisers. But definitely small and medium businesses,
4 for those who have lower value conversions, to fulfill their
5 objectives.

6 Q And it says here, "We are creating a two-sided
7 marketplace." Is that, to your best understanding,
8 referring to the Audience Network?

9 A That is correct. The Audience Network is a two-sided
10 marketplace.

11 Q And why is the Audience Network a two-sided
12 marketplace?

13 A Because it connects two businesses, one being the
14 publishers and the other one being the advertisers, supply
15 and demand.

16 Q Can you repeat that again? How does the Audience
17 Network make money for Meta?

18 A Sure. How Audience Network makes money is
19 fundamentally through this revenue share business model.
20 Advertisers pay Meta for impressions. Meta pays publishers
21 for impressions. Between the revenue coming from
22 advertisers and outgoing to publishers, there is a margin
23 component that Meta keeps, and that is the value add for
24 Meta.

25 MS. DUNN: This part is sealed.

1 THE COURT: I have it.

2 MS. DUNN: Okay.

3 THE COURT: Go ahead.

4 MS. DUNN: Thanks.

5 Q Can you provide some examples of such competitors?

6 A So this could be Google, AppLovin, Unity, Amazon, yeah.
7 It could even be -- I'm trying to think about those who
8 provide value to advertisers in the digital space. Yeah,
9 these would be the obvious ones. Apple could be one in some
10 instances even, yeah.

11 Q And is there a particular Google product that you have
12 in mind when you say Google?

13 A Google's -- Google Ads, Google Demand.

14 Q So Meta Audience Network considers any player that will
15 consolidate demand from different advertisers to be a
16 competitor?

17 A Digital demand that advertisers will buy supply for
18 online fundamentally, yes. Demand is demand. Advertiser
19 outcomes are advertiser outcomes. It doesn't matter if you
20 want to -- if you're an advertiser. To be completely simple
21 and clear, if you're an advertiser and you want to get
22 people to, for example, download your app -- just so we keep
23 up with this within this comparison -- you would take a
24 dollar, and you would put it into any and all demand-side
25 platform ad network, etc., etc. that will allow you to

1 promote your app effectively. This is the scope of
2 competition. If we are able to provide better value for
3 those advertisers, advertisers will come to us. If Google
4 will, if Apple will, they will go to them.

5 Q Would TikTok be another example of a competitor for the
6 Meta Audience Network?

7 A Yes, they could be. Yeah, definitely.

8 THE COURT: I have it.

9 MS. DUNN: Your Honor, I move to admit DTX 642.

10 THE COURT: Any objection?

11 MS. WOOD: No objection.

12 THE COURT: All right. It's in.

13 Q This document is titled, "End-to-End Audience Network
14 Bidding Strategy." It's dated December 13 of 2018.

15 Mr. Farber, do you recognize this document?

16 A I do.

17 Q Can you describe what this document is?

18 MS. DUNN: And for the public, I'll just say this
19 next page is sealed.

20 THE COURT: All right.

21 Q You mentioned that Meta Audience Network competes with
22 Amazon. Do you recall that?

23 A I don't recall Amazon specifically, but yeah, Amazon
24 would be one of our competitors. That's true regardless.

25 Q Does Meta Audience Network compete with The Trade Desk

1 for ad spend?

2 A Fundamentally, it would. The technical specs are
3 separate because The Trade Desk is an SSP. But
4 fundamentally, again, an advertiser will go and put their
5 dollar either into The Trade Desk, say, to buy ads on
6 business surface, or to Audience Network, say, to buy ads --
7 or impressions, I mean, by ads on Candy Crush. But it's the
8 same.

9 Q Does Facebook Audience Network compete with Google's
10 display network for ad spend?

11 A Yes.

12 Q Does Meta Audience Network compete with ad networks
13 that sell ads on websites?

14 A Yes.

15 Q Does Meta Audience Network compete with ad networks
16 that sell ads on connected television?

17 A Yes.

18 MS. DUNN: Plaintiffs, I think, wish to move in
19 PTX 1540.

20 THE COURT: 1540?

21 MS. WOOD: Yes, Your Honor.

22 THE COURT: All right. Any objection?

23 MS. DUNN: No.

24 THE COURT: All right. So plaintiffs' 1540 is in.

25 MS. DUNN: Okay. And I want to turn now -- I am

1 going to mark as the next exhibit Meta Exhibit 5, a
2 document. We're going to -- while it's loading into the
3 chat, I am going to explain to you a little bit about the
4 format of the document.

5 It's a PowerPoint presentation, and it says,
6 "Publishers increasingly distrust Google, in particular,
7 around data policy changes, its lack of transparency around
8 decisioning-making, and DFP."

9 Do you see that?

10 A I do.

11 Q What do you understand that to refer to?

12 A That again -- Osuf (phonetic) and Henry (phonetic)
13 believed or had data to support -- which, again, I'm not
14 doubting that publishers started losing trust in Google
15 because of data policy changes, which, again, without seeing
16 the list of, I don't know which ones they're exactly
17 referring to.

18 Decision-making and DFP fees are essentially what are
19 the fees charged, etc.

20 Q The next sentence says, "Publishers say that they don't
21 like the fact that Google is effectively the only company to
22 get a first look, which is intuitively anticompetitive."

23 Do you see that?

24 A I do.

25 Q What do you understand that to mean?

1 A What they're referring to is that Google as a singular
2 company receives -- no matter where they are in the
3 waterfall, because they're hosting the waterfall itself, get
4 view of the entire auction. They see first look.

5 So I think the concern here, which these are industry
6 noises that have -- or existing voices that have existed
7 throughout -- that even exist, by the way, today in the
8 context of bidding, not just in the context of Google.

9 In the context of any auction, period, there is always
10 going to be concern and intention where someone -- the same
11 company effectively runs the auction but also has a demand
12 source that goes into the auction. They have access to more
13 data. They have access to data first. And the concern is
14 are they misusing the data. The question is, what do you do
15 with the data, and do you misuse that data?

16 So if for example, I took the data that came in and
17 used it to position myself in a waterfall or position the
18 price that I'm willing to bid in a waterfall, especially
19 since waterfall is based on fixed prices, right. You ask
20 for a specific price as a publisher, and the demand responds
21 yes or no. If you were to misuse this data about what is
22 the price that is required by the publisher, you could
23 consistently win, which, again, you could do today in
24 bidding just as well.

25 You could have all of the bidders bid into a single

1 auction, take the highest one at 1 cent, and win. This is
2 usually referred to as second look.

3 But fundamentally, the difference here is having first
4 look or having a mediation is fine as long as you don't do
5 anything wrong with this. Once you do, it's anticompetitive
6 because you gain unfair advantage to win each auction only
7 in the premise -- on the fact that you're hosting it.

8 Q And at one point did you begin monitoring Google's
9 conduct vis-a-vis web?

10 A We don't monitor behavior on web. We don't participate
11 in web auctions.

12 Q Now, how much business does Audience Network do with
13 Google today?

14 A When you say Google, do you mean how much we -- do we
15 buy through Google mediation or how many of our auctions are
16 run with that?

17 Q Yes. Yes.

18 A Roughly, 20 percent of our business. To the best of my
19 recollection between 18 and 22 percent.

20 Q And what would happen if Google refused to do business
21 with you? What would happen to that 20 percent of your
22 business?

23 A Apologies. I'll get used to it yet.

24 Some of our demand will flow elsewhere. Some of our
25 demand will go to other mediation partners or to our

1 owned-and-operated surfaces.

2 And it's fair to expect that some of it will be
3 unserved. If Google stopped working with us, we will have a
4 higher supply constraint than we have today, and maybe some
5 demand that we serve today won't have supply to float it.

6 Q One of the mediation platforms partners that Meta
7 Audience Network works with today is Google, right?

8 A Yes, correct. Google AdMob and AdsManager.

9 Q And was it your testimony earlier that Meta regularly
10 monitors Google and other mediation platform partners it
11 works with to determine if their actions are consistent with
12 Meta's code of conduct?

13 A I can attest with high certainty that since I joined
14 the company a year and a half ago, we've been monitoring
15 these pretty consistently.

16 Q As of today, Mr. Farber, are there any principles
17 articulated in Meta's code of conduct that relates to floor
18 prices and auctions?

19 A I'd have to review the doc to say with absolute
20 certainty, but I do believe we do require them to be equal
21 for everyone.

22 Q And when you say you believe that Meta requires floor
23 prices to be equal for everyone, who is the everyone in that
24 sentence that you're referring to?

25 A All bidders. Ad requests contain floor prices. If one

1 bidder gets the floor price, all bidders must get the
2 exposure to the floor price, whether or not they choose to
3 use it.

4 Q And, Mr. Farber, you also testified earlier as Meta's
5 corporate representative that Meta does not view web app and
6 video app as separate markets. Is that right?

7 A That is correct.

8 Q We have one factual -- oh, that's you -- or probably
9 the lawyer.

10 Mr. Farber's lawyer says -- or plaintiffs say, "We have
11 one factual clarification Mr. Farber would like to make to
12 his prior testimony.

13 A Yeah, sorry.

14 Q Okay. What is that?

15 A Before I mentioned that we have over five but less than
16 ten mediation partners. In fact, we have 12. The five tend
17 to be the big ones that we -- the majority of our revenue
18 goes through.

19 Q Earlier you testified that ad servers are part of the
20 broader market. Do you recall that?

21 A Yes. Yep.

22 Q What's the broader market that you have in mind here?

23 A The ad tech market.

24 Q And what do you include in that?

25 A Any and all companies -- entities that take part in the

1 process of serving digital ads online.

2 Q As of 2017, in Meta's view, were there any user
3 experience implications from the use of client-side header
4 bidding?

5 A I believe these issues were well known well beyond
6 Meta's point of view. These are factual problems that come
7 with header bidding. Today's experience, the website loads
8 slower. You have additional steps that need to happen for a
9 website to load when you have client-side header bidding
10 integrated into it.

11 Q As of 2017, what were the widely known user experience
12 issues associated with client-side header bidding that you
13 were referring to?

14 A For clarity, by user, we're talking about end user, the
15 user who goes on the website, correct?

16 Q Correct.

17 A It would make the website load slower. You would have
18 two more components processed before an ad could load. You
19 would have to respect latency, which would happen slower as
20 you would collect different bids from whichever time-out
21 limitation the publisher has set. Yeah, you just make web
22 pages heavier.

23 Q Were there challenges publishers faced in implementing
24 client-side header bidding in 2017?

25 A Yes, there were multiple challenges for publishers.

1 Q Can you identify those multiple challenges?

2 A First is the fact that it would create a lesser user
3 experience for them, and that can create churn.

4 Second would be the setup costs, meaning this would
5 require nontrivial investments of engineers. Running this
6 would require nontrivial investment as well. This is not a
7 turnkey or plug-and-play solution. It would be, like I said
8 before, a workaround or a hack to waterfall. And in order
9 to maintain this, you need to have both the resources and
10 the technical chops to actually build a system in-house.

11 Q Was, in Meta's view in 2017, Google's open bidding
12 solution superior to header bidding in some of those
13 respects that you mentioned?

14 A To the best of my knowledge, Google's open bidding
15 solution addressed those issues. It was, as we understood
16 it, easier to integrate with and, obviously, ran with less
17 issues, and latency was more open.

18 Q Mr. Farber, since you joined Meta, has Meta sourced web
19 display, open-web display inventory, from any mediation
20 platform?

21 A When you say source, you mean did we bid or buy any web
22 inventory?

23 Q Correct.

24 A We did not.

25 Q Okay. And just to clarify, when you say you didn't bid

1 or buy any web display inventory, you never attempted to bid
2 or buy any web display inventory since you joined, correct?

3 A That is correct. As far as I'm aware, yes.

4 Q And since you joined Meta, because Meta has not
5 attempted to bid or buy web display inventory from any
6 mediation platform, Meta has also not attempted to buy web
7 display inventory from Google's DFP or any other Google
8 mediation platform. Is that right?

9 A That's correct. We don't attempt -- since we
10 deprecated web, we don't attempt to buy impressions through
11 anyone.

12 Q So Meta, since you joined, has not done any
13 investigation about Google's practices with respect to web
14 display inventory or their mediation, correct?

15 A That is correct, we have not.

16 Q And at the time that Meta still purchased web and app
17 inventory in Google's auctions, did it monitor Google's
18 auctions in accordance with its code of conduct?

19 MS. DUNN: Thank you, Your Honor.

20 THE COURT: Okay. All right. This is a good
21 time. How many more of these do we have?

22 MS. DUNN: Well, Your Honor, I had aspired to
23 finish by right now, and I think we're going to cut things
24 down such that we will only have one more of these tomorrow
25 and be able to rest.

1 THE COURT: All right.

2 MS. DUNN: I do have some exhibit issues that I
3 need to deal with. I'm happy to do that either today or
4 prior to resting.

5 THE COURT: We'll do it tomorrow.

6 MS. DUNN: Sounds good.

7 THE COURT: I just want to know before we get to
8 the exhibits, Ms. Wood, do you have a sense now as to how
9 long you anticipate your rebuttal case, or if you're going
10 to have one at all?

11 MS. WOOD: Your Honor, we have had a lot to
12 process today, so I do think we want to take some time to
13 think carefully about that. If we have a rebuttal case, I
14 don't anticipate it being very long, meaning certainly not
15 more than a day or two days at the absolute most. Of
16 course, that depends, in part, on the cross-examination.
17 But I would think that if we have a rebuttal case, it would
18 be relatively short.

19 MS. DUNN: Your Honor, just to get all the
20 information on the table, so last night plaintiffs disclosed
21 five potential witnesses for their rebuttal case; at least
22 two of whom we do not believe could even possibly be proper
23 rebuttal. And the others depending on -- I don't know if
24 the Court takes attorney proffers to figure it out or waits
25 until the testimony comes. But for sure, two of these

1 witnesses, it's hard to conceive that they could be proper
2 rebuttal, so we would love some --

3 THE COURT: Are they all live?

4 MS. WOOD: Yes, Your Honor.

5 THE COURT: They are all live witnesses.

6 Well, I think at this point what I'm going to do
7 is -- let's get Google's case finished. All right. So we
8 will get it finished tomorrow.

9 You must know who you're planning to call
10 tomorrow. I mean, your rebuttal case is going to start
11 tomorrow.

12 MS. WOOD: Our rebuttal case will start tomorrow.
13 What we did for Google for their benefit was tell them the
14 maximum number of rebuttal witnesses we could call. We're
15 not calling anyone on that list. We would like to have this
16 evening -- we're not saying we're calling everyone. And
17 what we would like tonight to do is to figure out which of
18 those five we feel we still need to call mindful of the
19 Court's admonitions about cumulativeness and the rest. And
20 so we would like the evening to reflect on that and make an
21 intelligent decision about that.

22 THE COURT: That's fine. Just for your planning
23 purposes tomorrow, as I said, we're going to start at 10:00,
24 and we're actually going to close Friday at 5:00.

25 All right. If we have to go into Monday, so be

1 it, but I would be surprised if we have to. Or if we do, by
2 the end of Monday, it should be over. Okay.

3 MS. DUNN: Your Honor, two quick things. One is,
4 I think at most we have a half an hour left, depending on
5 how fast we read, and then maybe an extra 15 minutes to
6 discuss -- the parties have agreed on some exhibits, and
7 then I have a couple of cleanup items. So I think at most
8 we're talking 45 minutes for Google.

9 I would like the opportunity, however, depending
10 on who plaintiffs call, to challenge some of these witnesses
11 as proper rebuttal: In particular, the fact witnesses where
12 it really does feel like the Court could make a decision
13 about that before putting a live witness on the stand.

14 Relatedly, because it could be that that is moot
15 by who plaintiffs actually intend to call, I think, you
16 know, it's not a long time between now and 10:30 tomorrow
17 morning when realistically their case will probably start.
18 So I would like to nail down when we could expect to hear
19 from the plaintiffs what they really will do.

20 MS. WOOD: I think, again, we need some time to
21 confer with our state co-plaintiffs and make a decision for
22 ourselves but we can certainly communicate that information
23 to them this evening.

24 THE COURT: Maybe by 9:00 tonight?

25 MS. WOOD: 9:00 p.m. should be fine.

1 MS. DUNN: Thank you, Your Honor.

2 THE COURT: All right. Very good.

3 So then let us read into the record those exhibits
4 that came in today.

5 THE COURTROOM DEPUTY: DTX 510; DTX 856; DTX 512;
6 DTX 1165; DTX 2537; DTX 1833; DTX 1869; DTX 1831; DTX 1829;
7 DTX 1972; DTX 1925; DTX 1853; DTX 399; DTX 733; DTX 1927;
8 DTX 1188; DTX 1974; DTX 1916; DTX 278; DTX 879; DTX 527; DTX
9 1918; DTX 1874; DTX 1969; DTX 1917; DTX 1858; DTX 1857; DTX
10 1855; DTX 1854; DTX 1923; DTX 1924; DTX 1865; DTX 940; DTX
11 1847; DTX 1931; DTX 1932; DTX 1848; DTX 1928; DTX 571; DTX
12 1875; DTX 1877; DTX 1954; DTX 1912; DTX 1977; DTX 1872; DTX
13 1873; DTX 1888; DTX 1863; DTX 1904; DTX 1949; DTX 1889; PTX
14 1401; DTX 1971; DTX 1970; DTX 1837; PTX 1882; DTX 1902; DTX
15 1840; DTX 1839; DTX 423; DTX 1860; DTX 1881; DTX 1827; DTX
16 1895; DTX 1896; DTX 1897; DTX 1884; DTX 1892; DTX 1891; DTX
17 1886; DTX 1978; DTX 1900; DTX 1901; DTX 1986; DTX 1907; DTX
18 1887; DTX 1883; PTX 22; PTX 298; PTX 56; DTX 1824; DTX 1599;
19 DTX 997; and DTX 642.

20 (Counsel confer.)

21 MS. WOOD: So one at the very end was our PTX
22 1540.

23 THE COURTROOM DEPUTY: That was previously --

24 MS. WOOD: It was previously in. Okay. Got it.

25 And then the other one -- did you have a DTX 1893?

1 And it also had an A.

2 THE COURT: Yeah. I'm not sure we've captured all
3 the A's today.

4 MS. WOOD: Right. I had several A's that I didn't
5 record, but we can take care of that piece, I think.

6 THE COURTROOM DEPUTY: 1893.

7 MS. WOOD: Okay. Okay.

8 MS. DUNN: I have a couple of others.

9 MS. WOOD: 733 I thought was already in.

10 THE COURT: Which witness?

11 THE COURTROOM DEPUTY: Stewart.

12 THE COURT: It's in.

13 THE COURTROOM DEPUTY: Sorry.

14 MS. WOOD: That's okay.

15 (Counsel confer.)

16 MS. DUNN: DTX 1915?

17 MS. WOOD: I think it was already in.

18 THE COURTROOM DEPUTY: That came in with Ravi.

19 MS. DUNN: Great. DTX 1920?

20 THE COURTROOM DEPUTY: That came in with Lee.

21 MS. DUNN: DTX 1925.

22 THE COURTROOM DEPUTY: I have that.

23 MS. DUNN: Okay. And DTX 1888?

24 THE COURTROOM DEPUTY: I have that too.

25 MS. DUNN: Great. Thank you.

1 I have two issues with respect to the Jessica Mok
2 exhibits. So there were two exhibits, DTX 510 and DTX 856,
3 where Ms. Mok -- these are spreadsheets with many tabs, and
4 Ms. Mok only used part of each one. And so we're just
5 seeking to designate or to admit the DVAA annual tab from
6 DTX 510 and the DVAA management tab for DTX 856, and those
7 were the only two pieces she discussed from these exhibits.

8 THE COURT: Okay. Just go over those again with
9 me.

10 MS. DUNN: For DTX 510 --

11 THE COURT: Right.

12 MS. DUNN: -- it's only the DVAA annual tab of the
13 spreadsheet.

14 THE COURT: Do you have a page number, or is it
15 just a tab?

16 MS. DUNN: It's a spreadsheet, so I think it's
17 just a tab.

18 THE COURT: Okay. All right. And 856 was what?

19 MS. DUNN: And for 856, it's the tab called DVAA
20 and then in parentheses MGMT, management.

21 THE COURT: Okay. All right. So that's all that
22 will be on the website tomorrow, and that's all that will be
23 in the actual reported. So cleaning up the record for the
24 court is going to be important.

25 MS. DUNN: And actually, I have an exhibit issue

1 tomorrow that's prospective, but I have another one that is
2 retrospective from the admission of Criteo 10-K. I don't
3 know if the Court would like me to address that now so that
4 it's on the website properly or --

5 THE COURT: Let's do it tomorrow.

6 MS. DUNN: Okay. Let's do it tomorrow.

7 THE COURT: I will have to find my notes. I have
8 now five books. Okay.

9 All right. Anything further?

10 MS. WOOD: Sorry. There were just so many today.
11 I believe -- we're just checking to see if 1882 and 1893 --

12 THE COURT: I have 1882, and I have 1893.

13 MS. WOOD: Thank you. Apologies for that.

14 THE COURT: All right. We're all set?

15 MS. WOOD: Yes.

16 THE COURT: Very good. And I have not gotten any
17 complaints. Although, apparently, the government's website
18 is easy. We did get a call from somebody in chambers
19 yesterday that they were having trouble finding Google's. I
20 don't know where you've put it because I haven't looked for
21 it.

22 MS. DUNN: I'm restricting myself from making an
23 open-web display joke right now.

24 THE COURT: Go ahead.

25 MS. DUNN: We will look into it, Your Honor.

1 THE COURT: All right. Very good.

2 MS. DUNN: Thank you.

3 THE COURT: Unfortunately, I have court tomorrow,
4 so you're going to have to clean your tables.

5 All right. We'll recess court until 8:30 tomorrow
6 morning.

7 (Proceedings adjourned at 6:10 p.m.)

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I certify that the foregoing is a true and
accurate transcription of my stenographic notes.

/s/
Rhonda F. Montgomery, CCR, RPR